AEROSOL AGE

THE MAGAZINE OF PRESSURE PACKAGING

Pharm

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JUL 25 1961
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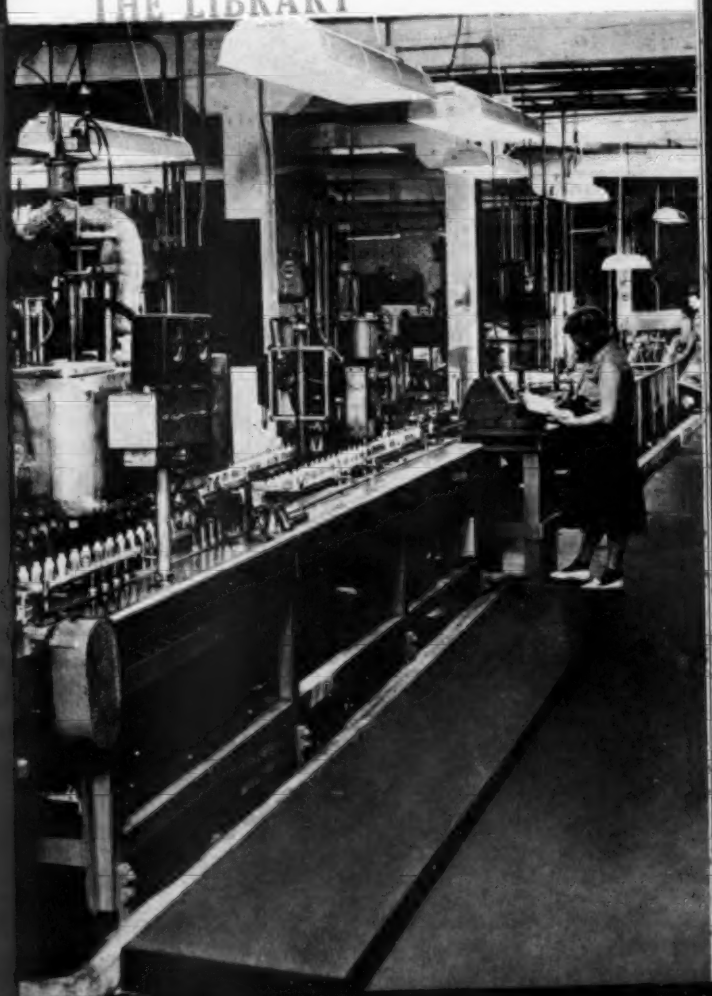
TGA Meeting Report
Italian Production Rising
The Richford Story
Filling and Crimping Problems



AUGUST, 1960

1st

NOW—

THE FIRST GLASS ENCLOSED SANITARY HIGH SPEED LINE FOR PRESSURIZED FOOD PRODUCTS . . .

An all-stainless-steel line for loading pressurized food products in aerosol containers under sanitary conditions is now in operation at Stalfort's modern Pressure-Pak plant. Completely segregated in a glass-enclosed area, this line is dismantled and sterilized before and after each production day. Any food product suitable for aerosol dispensing, even powder, can be economically handled in this area.

Three other high-speed lines are available for loading metal or glass aerosol containers that do not require completely sanitary conditions.

Stalfort, the country's largest filler, can also load liquids, waxes, or creams in conventional glass or metal containers.

JOHN C. STALFORT & SONS, INC.

Established in 1868

321 W. Pratt Street, Baltimore 1, Md.

sales curves stay healthy

for

aerosol products

packaged with

R A C

Customized spray valves

Sales success in aerosol products depends as much on the performance of the package as on the quality of the product itself. How important, then, to exercise *extra care* in the selection of the spray valve—the most important factor in pressurized packaging performance!

A-R-C Spray Valves offer you the industry's *widest choice* for every application. *Three* basic types—expanded into hundreds of specific variations with stock components—give you the *exact valve* for your particular requirements . . . at no premium in cost.

To ensure successful sales of *your* aerosol package, specify an A-R-C "Customized" Spray Valve—meticulously engineered and manufactured to the highest quality-control-standards.

Write, wire, or phone today for information on A-R-C "Customized" Spray Valves for your product or problem

Aerosol Research Company

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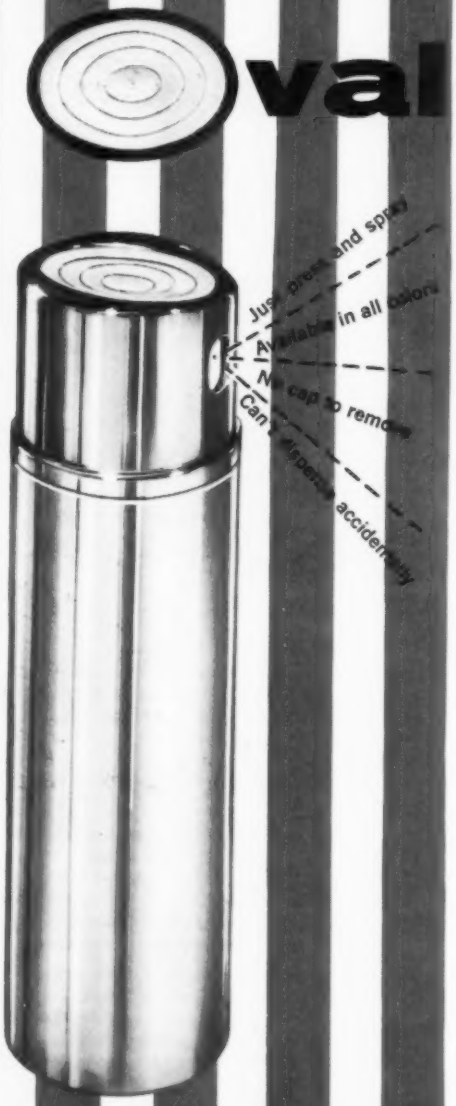
it's New! Trigger-Tip* Oval press actuator

by METAL FABRICATIONS



The OVAL PRESS plastic actuator and metal cap available in a wide variety of color combinations to fit 2-ounce containers with one inch mounting cup.

A richly finished all-metal 2-ounce container in a wide choice of decorator designs and colors . . . topped by Metal Fab's new OVAL PRESS.

- Just Press and Spray
- No Cap to Remove
- Can't Be Accidentally Dispensed
- Eliminates Cost of Special Valve Ferrule Finishing
- Can be Used with Either Metered or Unmetered Spray
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Also Available! Trigger-Tip* Aerosol Actuator in ALL PLASTIC to fit 3 and 4 ounce containers with one-inch mounting cup

Metal Fabrications INC.

P.O. BOX 808 • WATERBURY, CONN.

SPECIAL COATINGS AND FINISHES ON CONTAINERS AND OTHER AEROSOL COMPONENTS • SILK SCREENING * PRINTING ON CONTAINERS

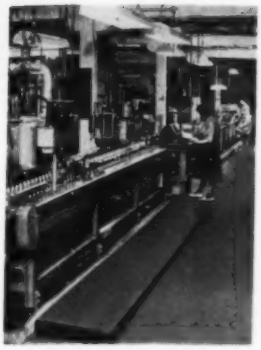
BOTTLE CLOSURES & JAR COVERS

AEROSOL CAPS-CANS

CONTAINERS

National Sales Agents • MONROE-DANFORD & CO. • 50-48th St., P. O. 807, Weehawken, N. J.

*Patent Pending



THIS MONTH'S COVER

New automatic filling line of G. Barr & Co., Chicago, custom filler, is designed to handle glass cologne and perfume containers at speeds of 120 per minute. Personnel shown are for quality control of weight and for water bath observation. More details and another photograph of the new line appear on page 57.

AUGUST, 1960 VOL. 5, No. 8

AEROSOL AGE

The magazine of pressure packaging

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mother

nature

does

a better

packaging

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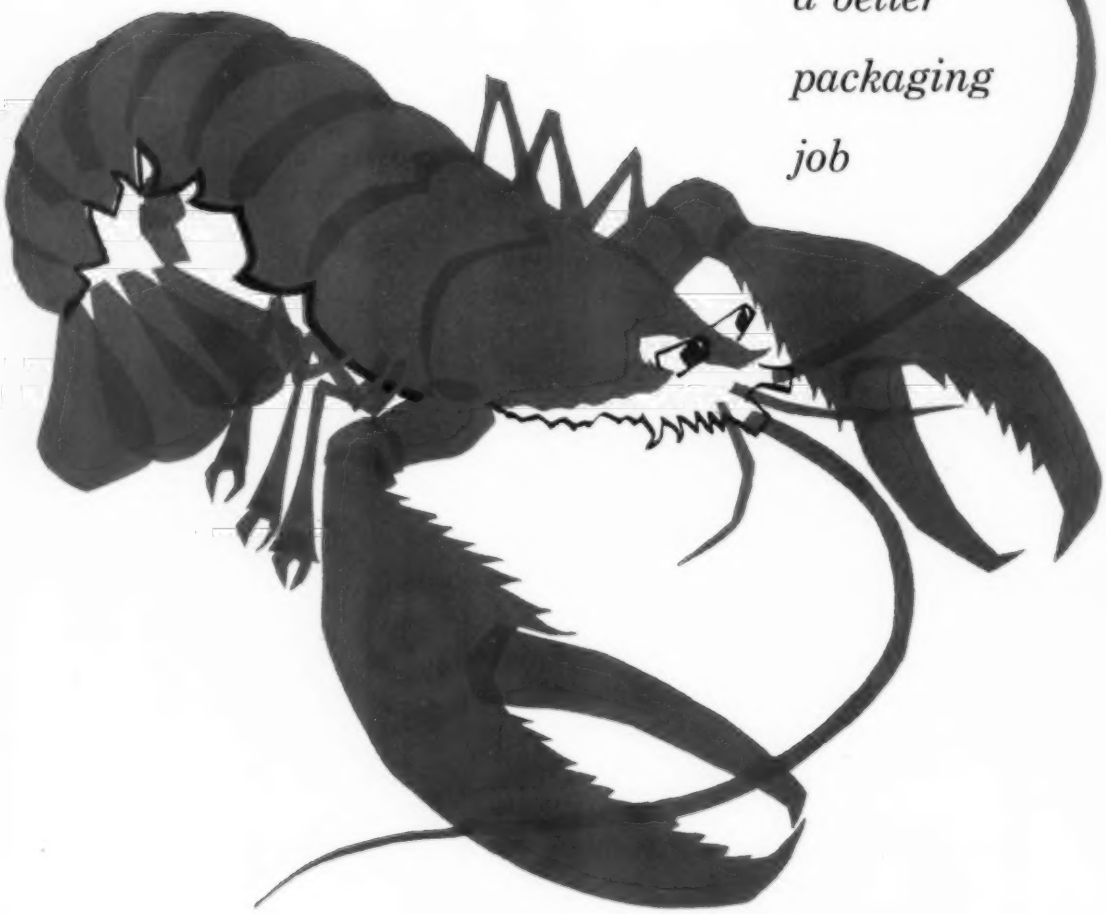
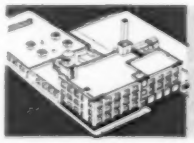


Because we have always maintained the strictest standards of quality in the industry, G. Barr & Company customers have seen *hundreds of millions* of private label aerosol packages bearing their product names, reach the hands of consumers, perfectly formulated . . . perfectly packaged. Only Mother Nature does a better job!

Today—with more than 5 acres devoted exclusively to custom formulation and filling of aerosols, you can be certain that when G. Barr & Company manufactures your aerosol product, you will receive the finest, most versatile, most efficient and economical service available. If Mother Nature doesn't do YOUR packaging, call on us.

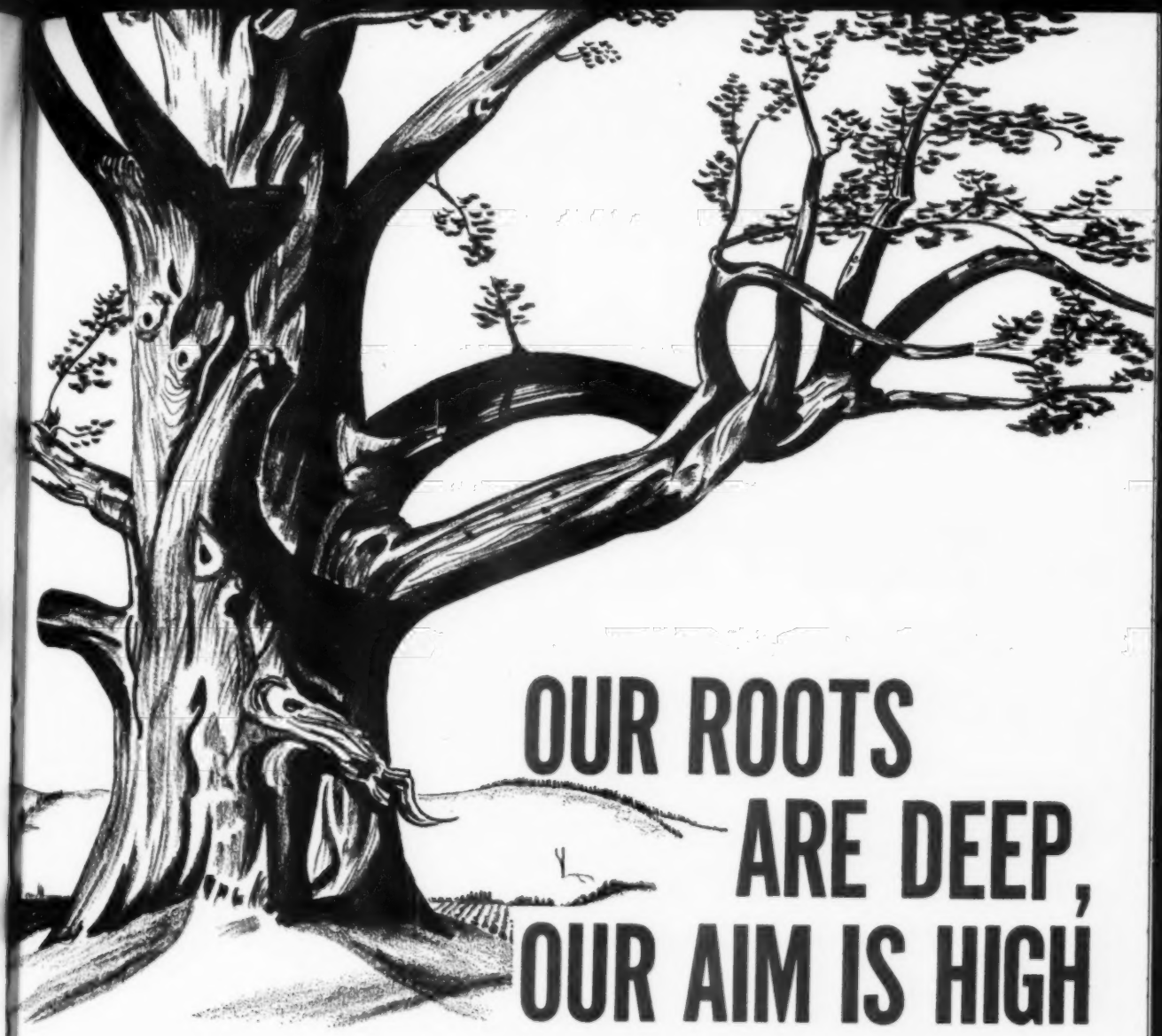
G. BARR & COMPANY

PRIVATE LABEL AEROSOLS



ACRES OF AEROSOL PACKAGING FACILITIES

General Offices: 3601 S. Racine Ave. Chicago 9, Ill.



OUR ROOTS ARE DEEP, OUR AIM IS HIGH

but Valves don't grow on trees

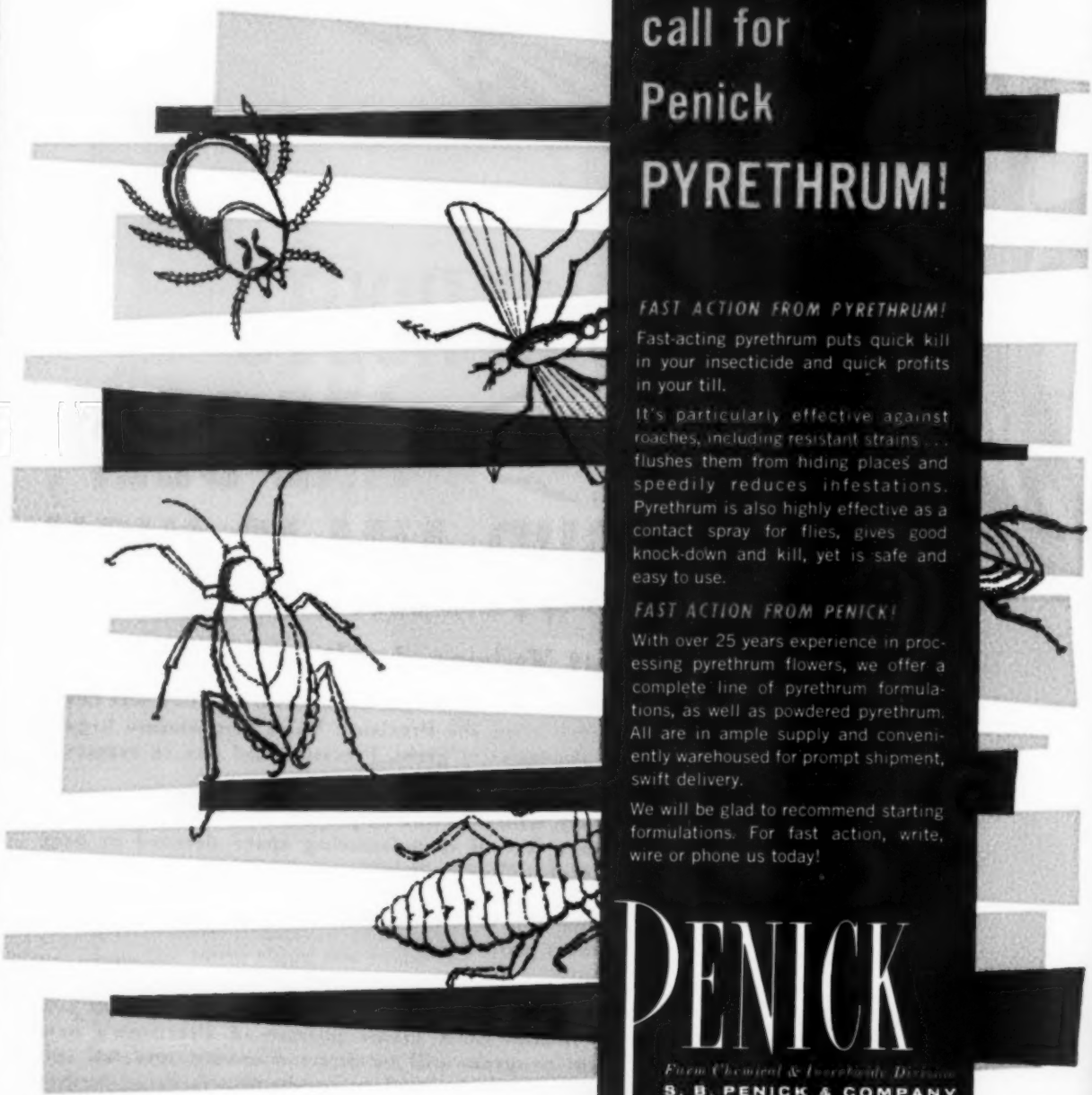
Some fifteen years ago, the aerosol industry was born. Shortly after, the Precision Valve Corporation began. As the industry grew, Precision did too, in research, in discovery, in development.

Today, with over 500 employees and more than 60,000 square feet of manufacturing space devoted to over 10,000 different combinations of specifications for aerosol valves, Precision works with the industry to create and develop new aerosol designs to improve current procedures.

Now, on the threshold of further expansion, Precision rededicates itself to serving the aerosol industry and its customers. A major portion of Precision's new plant program will be directed toward research and development; its modern production facilities further improved; its friendly hand extended and dedicated to helping everyone.

Yes, Precision's roots are deep . . . its aim high!

PRECISION VALVE CORPORATION • 700 NEPPERHAN AVENUE, YONKERS, N.Y.



for fast ***ACTION...***

call for Penick PYRETHRUM!

FAST ACTION FROM PYRETHRUM!

Fast-acting pyrethrum puts quick kill in your insecticide and quick profits in your till.

It's particularly effective against roaches, including resistant strains . . . flushes them from hiding places and speedily reduces infestations. Pyrethrum is also highly effective as a contact spray for flies, gives good knock-down and kill, yet is safe and easy to use.

FAST ACTION FROM PENICK!

With over 25 years experience in processing pyrethrum flowers, we offer a complete line of pyrethrum formulations, as well as powdered pyrethrum. All are in ample supply and conveniently warehoused for prompt shipment, swift delivery.

We will be glad to recommend starting formulations. For fast action, write, wire or phone us today!

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Farm Chemical & Insecticide Division

S. B. PENICK & COMPANY

4161 BECK AVENUE, ST. LOUIS 16, MO.

New York Chicago Los Angeles

San Francisco Portland, Ore.

AH! WHAT'S THIS... ANOTHER PROBLEM?

But, then, we're accustomed to problems – particularly customers' perfume problems, – as evidenced by our files of numbered compounds. These are high in the thousands and each represents some customer's problem successfully completed and accordingly numbered and thus identified. Since this system has been in effect we have recorded over thirty thousand compositions. That represents a tremendous *accumulation of experience* . . . enough, no doubt, to justify your assigning us *any fragrance* problem that may be bothering you. Our representative or a member of our perfume staff will be glad to discuss such matters with any authorized representative of your firm. You say the word!

FRITZSCHE BROTHERS, Inc.

76 NINTH AVENUE NEW YORK 11, N. Y.

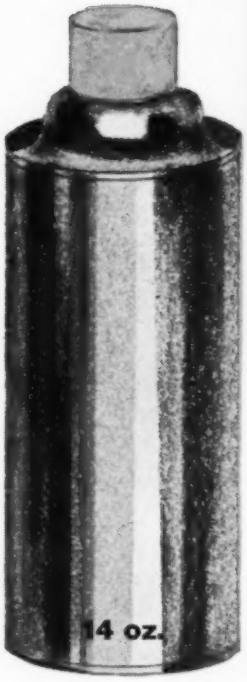
Branch Offices and *Stocks: Atlanta, Ga., Boston, Mass., *Chicago, Ill., Cincinnati, Ohio, Greensboro, N. C., *Los Angeles, Cal., Philadelphia, Pa., San Francisco, Cal., St. Louis, Mo., Montreal and *Toronto, Canada; *Mexico, D. F. and *Buenos Aires, Argentina. Plants: Clifton, N. J. and Buenos Aires, Argentina.

Only Crown Makes Every Aerosol Can You will Need!

Crown is the largest manufacturer of aerosol containers—and the only supplier to offer you all types

TASK-DESIGNED aerosol cans by Crown meet all your requirements, and meet them efficiently! Whether your product demands the exclusive, seamless Spra-Tainer® or can be packed in a conventional 3-piece aerosol can . . . whether you want 6, 8, 12, 14 or 16 ounce capacities . . . come to Crown for reliable aerosol containers!

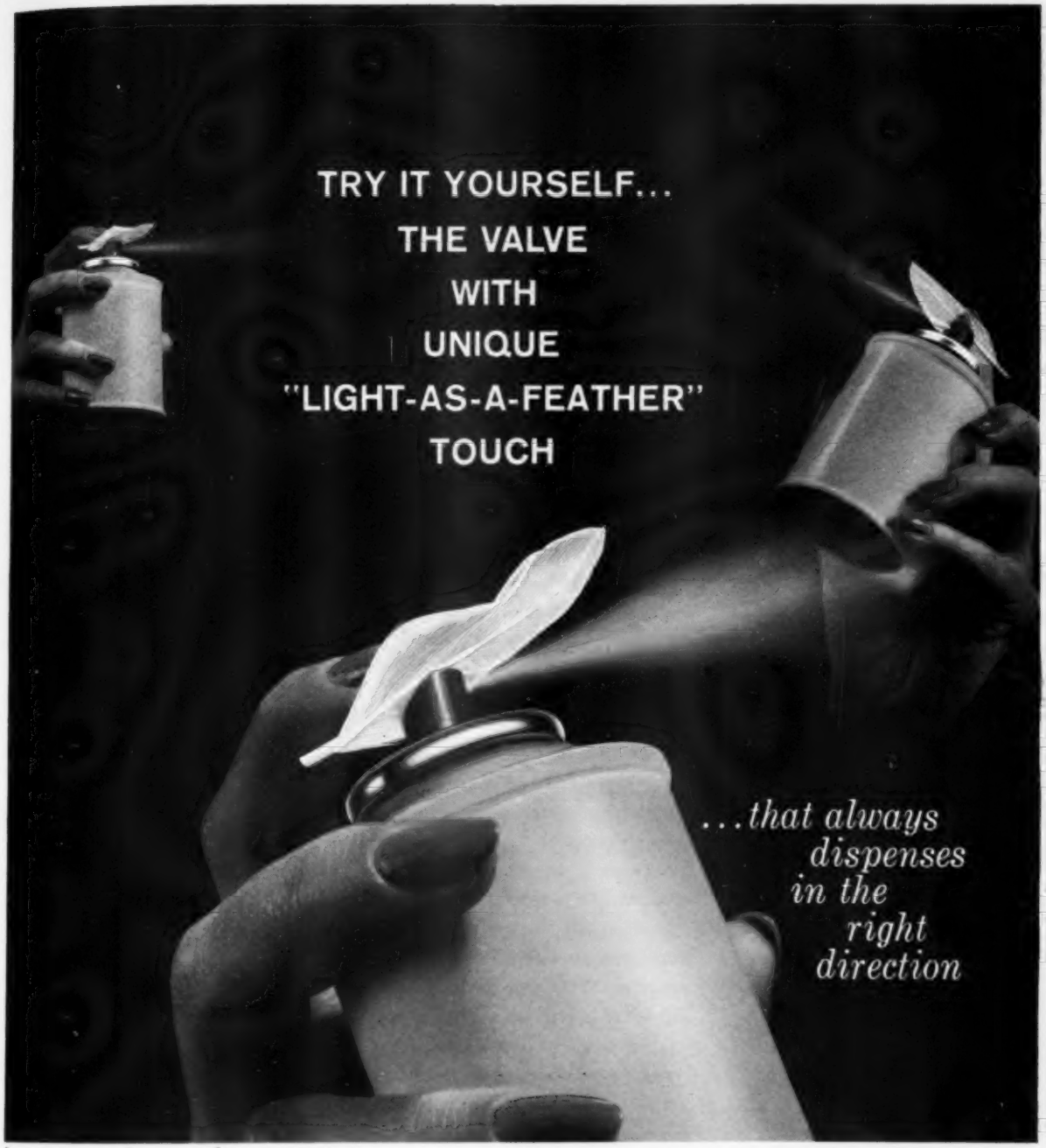
Come to Crown for reliable advice, too. The first production-line disposable aerosol can was produced by Crown, and Crown has led the field ever since. Take advantage of this vast backlog of experience—write today for more information.

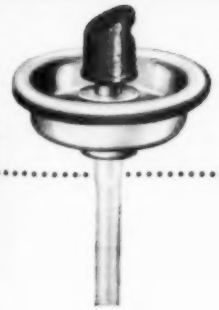


CROWN

for cans · crowns · closures · machinery

CROWN CORK & SEAL CO., INC., 9300 Ashton Rd., Philadelphia 36, Pa.





Meet experienced engineers in the Aerosol Valve Industry. ■ Talk with laboratory people who can help analyze your product. ■ Learn the value of a century-old tradition of quality. ■ See up-to-the-minute production facilities. ■ In short . . . MEET SCHRADER . . . and see for yourself.

Schrader® a division of SCOVILL Aerosol Valves

A. SCHRADER'S SON, *Division of Scovill Manufacturing Company, Inc.*, 470 Vanderbilt Ave., Brooklyn 38, N. Y.

Offering a new Insecticide

Butonate

LOW IN TOXICITY • ECONOMICAL

Now available in commercial quantities: a new insecticide called *butonate.** Developed at the University of Wisconsin, it is unique among insect killers in having all of the following properties:

- *Residual action against insects even in light concentrations*
- *Low in toxicity to mammals*
- *Non-staining*
- *Inoffensive odor*
- *Soluble in most organic solvents*
- *Compatible with nonalkaline insecticides and fungicides*

Butonate is a cholinesterase inhibitor. Laboratory tests have proven its effectiveness against household and certain agricultural pests. It may be formulated as an oil spray, an emulsion, wettable powder, or dust.

One formulation, Prentox Pybuton Concentrate, contains 16% by weight butonate, 1.0% piperonyl butoxide and 0.4% pyrethins, combining the residual action of butonate with fast knock-down action while maintaining low toxicity. Butonate is also available as a 25% emulsifiable concentrate, as a 20% oil soluble concentrate, and in a technical formulation containing 95% by weight butonate.

Chemically, butonate is an organic phosphate—0, 0-dimethyl 2, 2, 2-Trichloro-1-n-butyryloxyethyl phosphonate. It is a colorless, somewhat oily liquid, stable in neutral or acidic aqueous solutions, having a (mild) ester odor. Additional information, test data and samples for testing may be secured from us at any of the addresses shown below.

**Butonate's manufacture is licensed by the Wisconsin Alumni Research Foundation under U. S. Patent No. 2927881.*

Prentiss Drug & Chemical Co., Inc.

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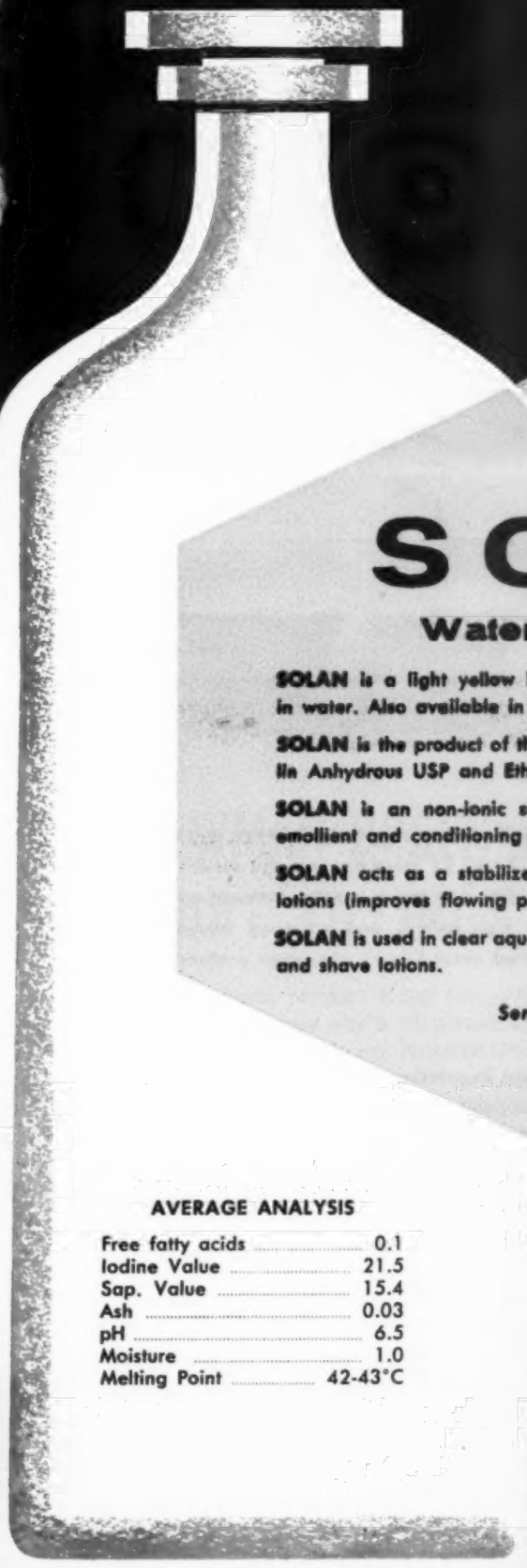


SOLAN

Water-Soluble Lanolin

SOLAN is a light yellow hydrophilic wax forming sparkling clear solutions in water. Also available in clear liquid form (50% aqueous solution).

SOLAN is the product of the reaction between "Corona" Luxury Brand Lanolin Anhydrous USP and Ethylene Oxide (65-70 mols.).

SOLAN is an non-ionic surface-acting agent possessing the characteristic emollient and conditioning properties of lanolin.

SOLAN acts as a stabilizer and viscosity controlling agent for certain o/w lotions (improves flowing properties) and creams.

SOLAN is used in clear aqueous and alcohol systems—shampoos, bubble baths and shave lotions.

Send for your Free Testing Sample of "Solan"

AVERAGE ANALYSIS

Free fatty acids	0.1
Iodine Value	21.5
Sap. Value	15.4
Ash	0.03
pH	6.5
Moisture	1.0
Melting Point	42-43°C

Croda

★ New York
★ London, England
★ Verviers, Belgium
★ Milan, Italy

CRODA, Inc. 15 East 26th Street • New York 10, N. Y. • MU 3-3089

Subsidiary: Hummel Lanolin Corp., 185 Foundry Street, Newark 5, N. J.

INDUSTRY MEETING CALENDAR

Chemical Exposition U.S.A., 1960, Statler-Hilton Hotel, New York City .....Sept. 3-15

Society of Cosmetic Chemists, N. Y. Chapter, Hotel New Yorker, New York .....Sept. 7

Society of Cosmetic Chemists, annual seminar, The Drake Hotel, Chicago. .....Sept. 15-16

Chemical Specialties Manufacturers Association, Second Golf Outing, Medinah Country Club, Medinah, Ill. .....Sept. 20

Drug, Cosmetic & Sundry Show of Pharmaceutical Council of Greater New York, Trade Show Building, New York .....Sept. 25-27

Chemical Specialties Mfrs. Assn., Meeting of Board of Governors, Division Executive Boards, and Committees, Hotel duPont, Wilmington, Del......Oct. 3-5

Society of Cosmetic Chemists, N. Y. Chapter, Hotel New Yorker, New York .....Oct. 5

French Packaging Institute, First International Packaging Machinery Show, Paris, France.....Oct. 14-23

Interkama, 2nd International Congress and Exhibition for Instrumentation and Automation, Dusseldorf, Germany .....Oct. 19-26

Canadian Manufacturers of Chemical Specialties Association, 3rd annual convention, Queen Elizabeth Hotel, Montreal....Oct. 24-26.

National Paint, Varnish and Lacquer Association, 73rd annual meeting, Drake Hotel, Chicago..... .....Oct. 27-29

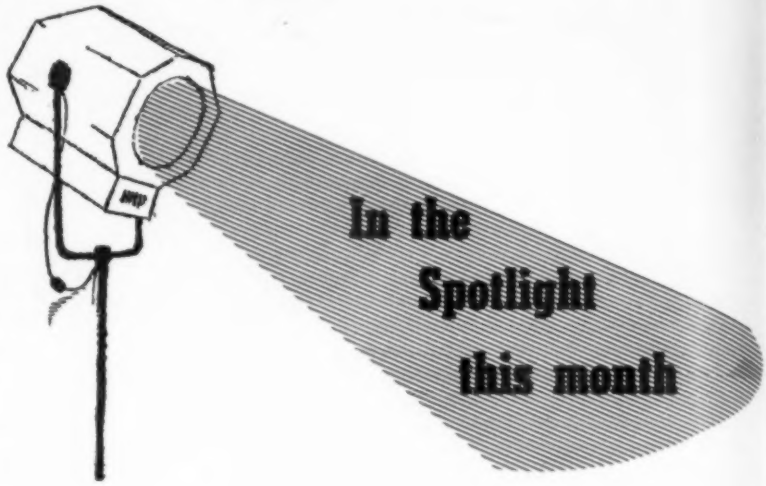
Society of Cosmetic Chemists, N. Y. Chapter, Hotel New Yorker, New York .....Nov. 2

Toilet Goods Association, scientific section, fall meeting, Waldorf Astoria Hotel.....Nov. 30

Chemical Specialties Manufacturers Assn. 47th annual meeting, Hollywood Beach Hotel, Hollywood, Fla. .....Dec. 3-9

Chemical Specialties Manufacturers Association, Meeting of Board of Governors, Division Executive Boards and Committees, Hotel Peabody, Memphis, Tenn.
March 8-9, 1961

National Packaging Exposition and National Packaging Conference of American Management Association, Exposition Center, Chicago..... .....April 10-13, 1961



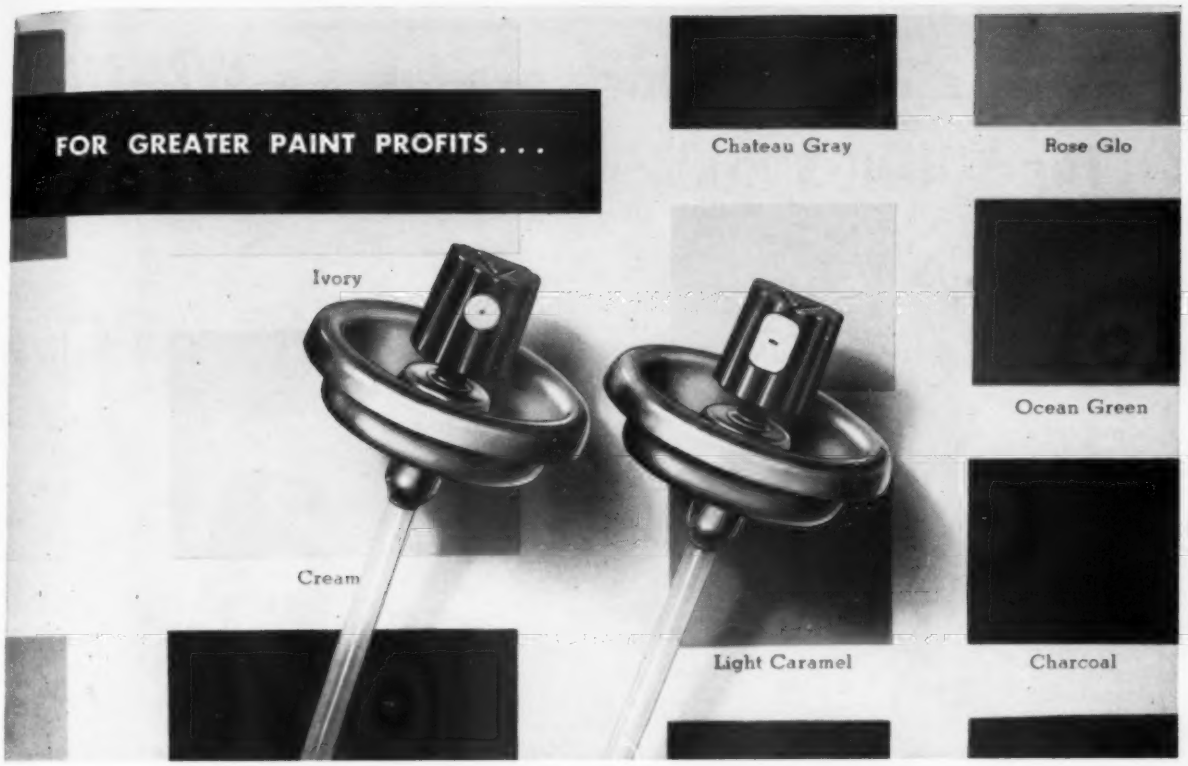
- **Aerosol Cosmetics** . . . Victor DiGiacomo, who needs no introduction to the regular readers of **Aerosol Age**, outlines some of the chemical essentials of formulating appealing cosmetic aerosols. His article, including a whole series of aerosol formulas, begins on page 24.

- **Milwaukee Journal Study Surveys Aerosol Products** . . . On page 28 and 29 there appears the results of consumer preference studies for three leading aerosol product types: shave creams, hair sprays, and whipped toppings. Leading brands are rated according to consumer preference over the past few years.

- **Aerosol Regulations and Their Anomalies** . . . Variations in aerosol packaging regulations from country to country sometimes cause the marketer (and the component supplier) difficulties. Alfred Herzka, noted British aerosol consultant, explains some of the differences and similarities on page 30.

- **Aerosol Production Seen Rising in Italy** . . . An interview with Dr. Mario Ramella, president of Solfrene, traces recent trends in the Italian industry. In the story on page 39, his opinion is reported on valves, propellants, and marketing trends in that country.

- **The Richford Story** . . . Continuing its coverage of the leading aerosol suppliers, **Aerosol Age** this month (on page 34) focuses attention on Richford Corp., supplier of cartridges and covers for perfume and cologne marketers.



USE NEWMAN-GREEN AEROSOL VALVES TO SPEED PRESSURE FILLINGS, CUT PRODUCTION STOPS

Uninterrupted production pressure filling always increases your profits. The surest way to fill aerosol containers fast and trouble-free is to use Newman-Green valves. This simplified valve design gives you a competitive edge throughout the paint industry. Exclusive features include metering orifices in spray head that are reached easily for cleaning, a design that eliminates the sources of clogging due to a build up of paint particles, and a spray pattern that can be varied completely in seconds simply by changing the valve head only.

In addition, Newman-Green valves can be used on metal or glass containers and excessive swelling of the gasket is not detrimental to valve operation. You get especially good operations in applications of retouching paints used for autos, appliances, household equipment, etc. For full details, call us today. We take pleasure in helping you design even better packaged products for today and the future.

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NEWMAN-GREEN *Creative Aerosol Valve Engineering*

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VCA *teamwork produces a* WINNER

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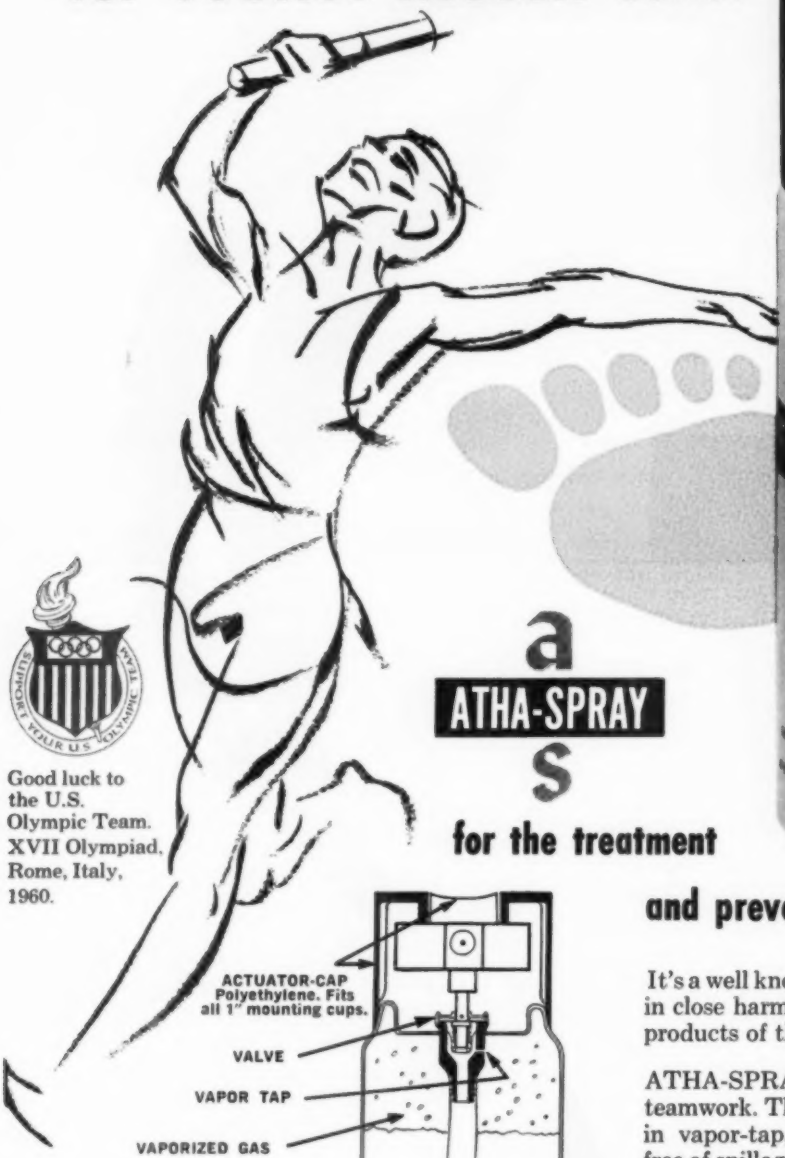
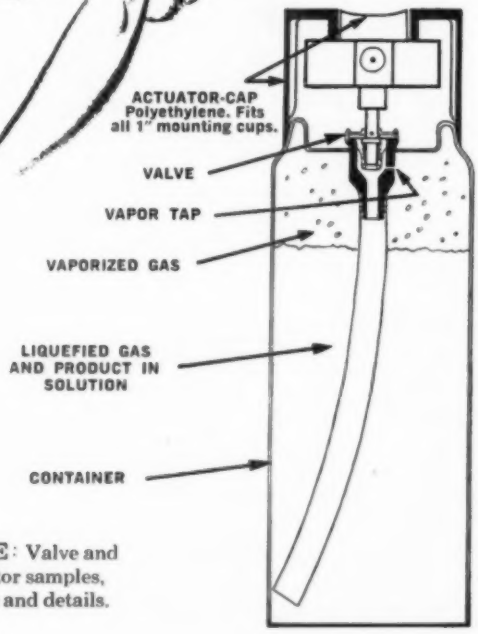


Good luck to the U.S. Olympic Team. XVII Olympiad, Rome, Italy, 1960.

Actual size

a ATHA-SPRAY S for the treatment and prevention of Athlete's Foot.



It's a well known fact that VCA specialists work in close harmony with its customers to market products of the highest quality.

ATHA-SPRAY is just another example of VCA teamwork. The VCA B9-FG valve, with a built-in vapor-tap, assures concentrated coverage, free of spillage, evaporation and contamination. The exclusive permanently affixed "Trigger Tip" actuator is so constructed to eliminate a cover cap and accidental discharge. Just press and spray with finger-tip control.

FREE: Valve and actuator samples, prices and details.

VCA INCORPORATED

CSMA

VALVE CORPORATION OF AMERICA, Inc.
1720 Fairfield Ave. • Bridgeport, Conn.

IF YOU ARE CONSIDERING AEROSOL PACKAGING FOR INCREASED PHARMACEUTICAL SALES...

PFIZER HYDROCORTISONE, NEOMYCIN, POLYMYXIN AND VITAMINS WILL INTEREST YOU!

Firmly convinced that aerosol dispensers can open new doors to pharmaceutical sales, Pfizer continues to cooperate closely with the pressure packaging industry.

The purpose: To develop formulations that will permit pharmaceutical manufacturers to use most profitably the advantages inherent in pressure-packed containers.

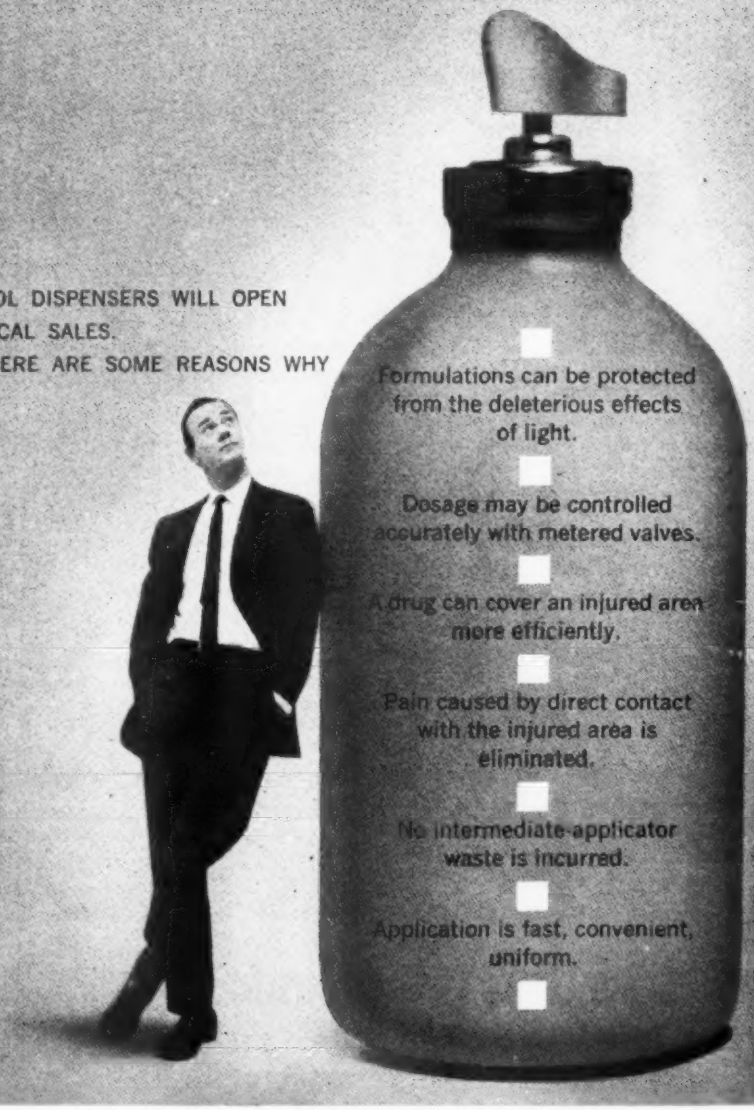
Typical findings: Preparations utilizing Pfizer Hydrocortisone, Neomycin, Polymyxin and vitamins are enhanced by the natural ability of pressure containers to maintain formulations completely free from atmospheric contamination.

The stability of liquid vitamins is substantially increased because the preparations are overlayed by inert gas for the life of the container.

Write to Pfizer for reprints of the interesting report "Pressure-Packed Pharmaceuticals." Technical Bulletins on Pfizer Polymyxin, Neomycin and Hydrocortisone are also available on request.

PFIZER BELIEVES THAT AEROSOL DISPENSERS WILL OPEN NEW DOORS TO PHARMACEUTICAL SALES.

HERE ARE SOME REASONS WHY



- Formulations can be protected from the deleterious effects of light.
- Dosage may be controlled accurately with metered valves.
- A drug can cover an injured area more efficiently.
- Pain caused by direct contact with the injured area is eliminated.
- No intermediate-applicator waste is incurred.
- Application is fast, convenient, uniform.

Manufacturing Chemists for Over 100 Years

Pfizer

Science for the world's well-being

CHAS. PFIZER & CO., INC.
CHEMICAL SALES DIVISION
630 Flushing Avenue, Brooklyn 6, N.Y.
Branch offices: Clifton, N. J.; Chicago, Ill.; San Francisco, Calif.; Vernon, Calif.; Atlanta, Ga.; Dallas, Tex.; Montreal, Can.

Problem: How to capture a profitable market.
Solution: Switch to "controlled spray" aerosol containers.

The logical source...

EMSON METERED VALVES

If your product lends itself to controlled spray you have the opportunity for immediate customer acceptance. And an EMSON METERED VALVE makes your product the best aerosol package in its field...because EMSON is the creator of the metered valve principle, the one used on all major pharmaceutical (where accuracy is a must) and cosmetic metered aerosol packages.

Here are just a few of the powerful sales advantages with *EMSON METERED VALVES*

- Precise dosage
- Predetermined number of sprays
- No waste, no fuss
- Stainless steel parts
- One piece, seal-proof dip tubes

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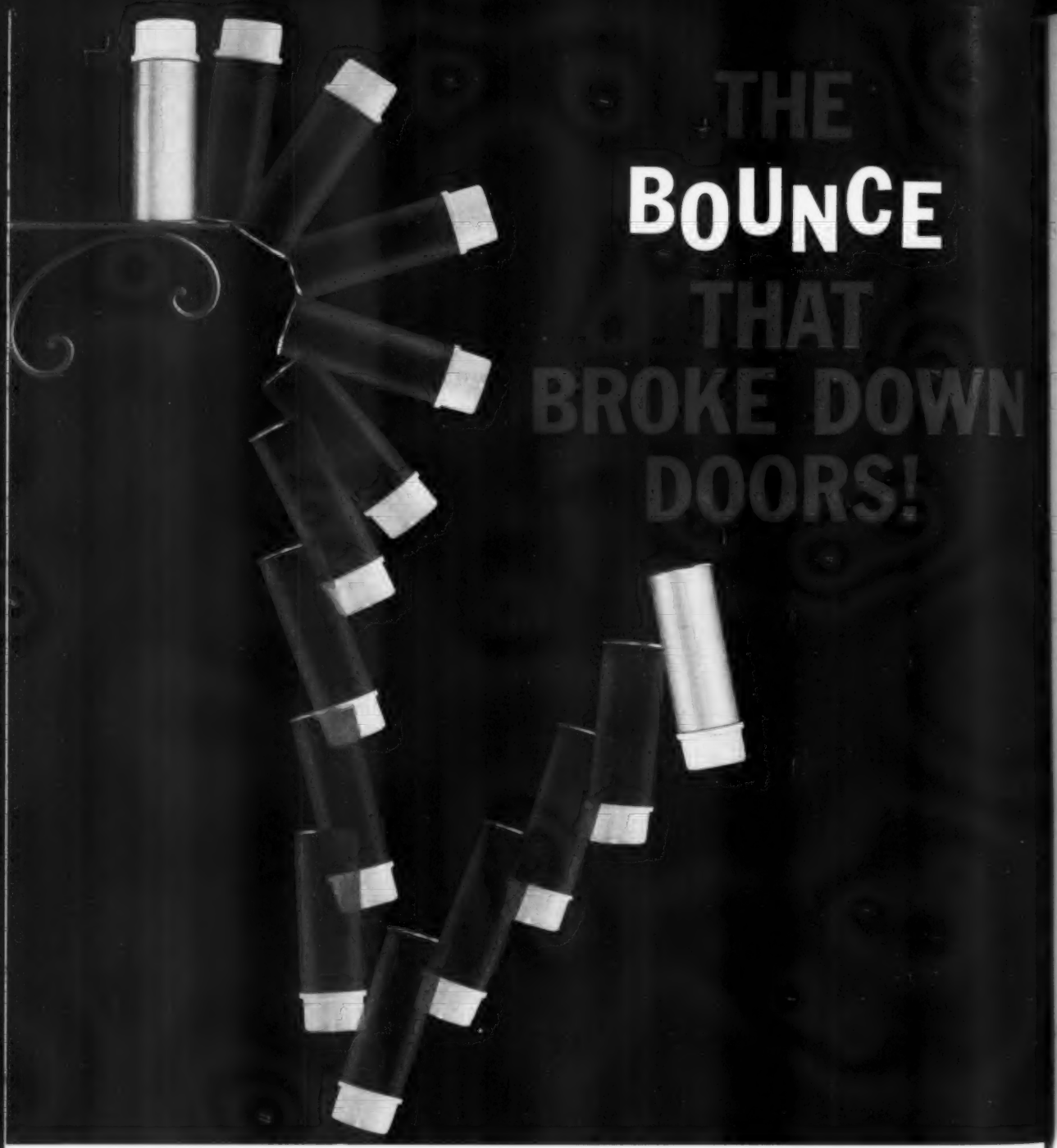

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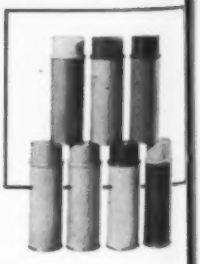

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EDITORIALS

The Future Market in Europe . . .

JULY 1 was an important date for the aerosol industry. On that date, after a whole series of misleading shifts and starts, Europe was split into two separate trade alliances—the Common Market and the Free Trade Community. Now, instead of dealing with a vast variety of countries (each with its own tariff rules) the U. S. aerosol exporter will be faced with the prospect of working — at a "tariff disadvantage" — against the competition of companies which are selling in "their own back yards."

As has been pointed out previously in this column, one logical solution is the establishment of good licensees, a practice already followed with notable success by some of the major aerosol valve suppliers. But are there other solutions which offer promise? "American Industry in Europe," a report of the Arden House Conference on "The European Common Market and the American Chemical Industry" (sponsored by Arthur D. Little, Inc.) goes into this question in some detail. The report writes off "exclusive reliance on exports" as a means of selling in the European Common Market as "most dangerous."

The course which offers the most promise, according to the Arden House Conference, is *direct investment* by U. S. firms. "American companies on the whole were thought to be extremely well placed to take advantage of European Common Market opportunities in view of their experience in mass marketing and in having their products and technology geared to mass markets. Their keen sensitivity for new product development should enable them to reap the benefits of many new opportunities."

Although it mentions a number of potentially good chemical investment areas (resins, petrochemicals, plastics, synthetic fibers, etc.) the one which comes closest to dealing with the aerosol industry reads like this: "In one seminar it was strongly emphasized that the U. S. companies should concentrate on those products which are heavily oriented toward research and technology —in other words, product areas that require very high research and development expenditures and where U. S. firms occupy a unique position. Pharmaceuticals, synthetic rubber, polymer materials, and synthetic fibers were cited as examples. It was also emphasized that pharmaceuticals have the advantage of lower investment and possible subdivision of manufacturing operations which would tend to be more flexible as the ECM (European Common Market) picture changes. The ideal situation would be one which permits a U. S. firm to supply research and development know-how on a continuing, rather than a one-shot basis. It was agreed that the mechanism for updating the product, process, and marketing know-how based on new experience in the U. S. is necessary to foster development of the ECM enterprise."

This extremely generalized discussion would appear to fit fairly well the American aerosol component and equipment supplier, and the major aerosol marketer as well. Having survived and flourished through nearly 12 years of keen competition, a U. S. aerosol firm can well afford a detailed examination of the European market—either to protect its own existing market or to build a new one for its products. What the Arden House report seems to be advocating is closer working alliances between American and European firms, with the American company (in the case of the aerosol industry) contributing its own research data, production know-how, and mar-

(*Continued on Page* 88)

COSMETIC AEROSOLS

By Victor DiGiacomo*
Administrator of Perfume Laboratories
Givaudan-Delawanna, Inc.
New York, N. Y.

(*Nestle-LeMur photo*)

THERE is little need to trace the history of the aerosol; this tale has been told many times during the past decade. Suffice to say that the pressure package has, during this time, become a packaging medium of some importance not only for household specialties and toiletries but for foods and pharmaceuticals as well. With research continuing, it is difficult to predict how far the aerosol will go. However, we feel safe in predicting that the aerosol has far from reached the many applications for which it can possibly be utilized, and therefore we can expect to see continued growth in many diversified fields.

Although the aerosol has been proved to be an ideal packaging medium for many different products, it has been learned that one cannot simply change from a bottle or tin can to the pressure package without proper investigation. The aerosol brought with it problems, inherent unto itself, which had to be solved before it could take its place in our day-to-day commerce. In spite of these difficulties, at first seemingly insurmountable, in a comparatively short span of one decade the aerosol has reached an enviable position among our packaging media.

Our own experience with cosmetic aerosols goes back to the very beginning, and in our initial research we learned that the selection of aromatic materials for aerosol perfume application had to be based upon several factors:

1. Solubility:

Perfume constituents should be soluble in the aerosol propellant, into which they are to be incorporated, as well as in other components of the pressure formulation. However, less soluble materials can be used if they are in solution with a co-solvent which has the ability to solubilize it in the propellant mixture.

2. Sensual Reactions:

The perfume materials must not cause any untoward effects when the

* Presented April 21 to the Seminar on Aerosol Technology at St. John's University College of Pharmacy, Jamaica, N. Y.

finished product is used. Essential oils and aromatic chemicals should, therefore, be selected accordingly. It has been noted that, due to the fine spray and the particle size, materials which cause only slight sensual reaction under normal use conditions have a different effect when dispensed from aerosol packages. Research has revealed a number of materials that are commonly used in perfumery which have not been known to cause sensual reactions under normal conditions of use but which do have untoward effects when aerosol sprayed.

3. Compatibility:

The problem of compatibility is of utmost importance. In most aerosols, if there is any evidence of chemical activity, the perfume composition will act as an indicator. The *first* evidence of such chemical activity will usually be a noticeable change in the odor of the composition. The extremely sensitive perfume ingredients are readily decomposed in the event of formulation instability. It is possible, however, by using the proper combination of aromatic materials, to formulate perfume compositions which will undergo little or no change regardless of the incompatibility of the basic aerosol formulation.

After solving the problem of what perfume ingredients may be used in the aerosol product, the perfumer-chemist is confronted with the problem of what the fragrance of the finished aerosol formulation will be like after it has been pressurized. Research has proved that perfume compositions originally formulated for conventional applications have to be completely revised for use in aerosol products. When smelled from a blotter or bottle, these materials produce an olfactory stimulus which is entirely different from the scent obtained after the fragrance is incorporated into a pressure container. The individual notes of the perfume composition can be easily detected when smelled from the bottle or from the blotter, even during different stages of drying. When the material is sprayed under pressure, however, complete dissemination of the entire perfume compound is accomplished in an instant. It is important to remember that a given perfume composition may have a different note when sprayed at different pressures and from different valve openings. It is, therefore, necessary that a formulation to be used in an aerosol be balanced in order that the desired note can be obtained at the pressures being considered for aerosol application.

Aerosol Foam Products*

The foam aerosol formulations have no doubt been partially responsible for the large growth of this industry. Most of these formulations are based on oil-in-water emulsions together with a specific propellant or mixture of propellants. In some cases, the formulations must be so prepared that the propellant becomes a part of the functional formula and lathers or foams the product during dispensing.

There is a much greater degree of flexibility in the choice of perfume compositions for this type of product, since the solubility factor is not *as critical* as is the case with other pressure-packaged products. The nature of the foam type materials allows the perfume to be emulsified and suspended in the products themselves, and presents very little valve difficulty or package failure which might be caused by the perfume composition.

The aerosol shave cream was one of the first successful cosmetic products to be put into a pressurized package. This product cannot be classified as either a brushless or lather type, since it is basically a combination of both. In formulating products of this type it is necessary to consider not only the component parts of the container but also the propellant, which becomes an intricate part of the entire formulation. This emulsion is based on myristate and stearate soaps, as well as wetting agents, emollients, lanolin and many other ingredients which may enhance the product. Individual fatty acids or mixtures of fatty acids are, in most cases, responsible for the appearance and working properties of this aerosol product, and they must therefore be selected with great care. In most instances, triethanolamine is used as a saponifying agent, the amount used normally being one-half the amount of fatty acids contained in the formulation. This ratio insures a small quantity of free triethanolamine which will have a buffering effect when the shave cream is packaged in the aerosol container. Foam products which utilize triethanolamine stearate as the emulsifying ingredient will usually have a loosely knitted lather. Those utilizing triethanolamine myristate as the emulsifying agent will have a dry, tightly knit lather. It is recommended that a combination of these soaps be used to attain the desired physical appearance and working properties of the finished shave cream.

The addition of cetyl alcohol, in low concentrations, to foam-type products gives the lather or foam a velvet-like appearance which may be highly desirable in shave creams, hand lotions and cologne foams. In certain instances, it may be advantageous to utilize materials that will give foams a heavier degree of consistency, thereby giving body to the formulation. This can be accomplished with the addition to the basic formulation of 1% of PVP. Depending on a product's end use and on the lathering properties required, the addition of glycols or certain sugar alcohols plays an important part in the physical and functional properties of the foam. Sugar alcohols (such as Sorbo) absorb the propellant when the formulation is pressurized, thus allowing the foam to lather more readily when it is dispensed. Due to its insolubility in the propellants, the use of propylene glycol results in a rather heavy, thick lather. We point out again, therefore, that any product which we have previously mentioned should be selected for use in a foam

* NOTE: Patents are now in force covering the use and manufacture of certain specific products. It is suggested, therefore, that the patent situation be investigated before pressure products are manufactured.

product depending on the end use of the finished aerosol.

For this product type, the quantity of propellant normally recommended is between 7% to 10% of a 60-40 mixture of propellants 114 and 12. It must be kept in mind that the quantity of propellant used will have an influence on the dispensing properties of the end product, since it becomes an integral part of the entire formulation. Under-charged containers will result in products which are wet in character, with a minimum amount of lather. Over-charged containers will result in products rubbery in nature and dry in character. The selection of the precise amount of propellant depends not only on the end use of the formulation, but on the constituents contained in the product and the physical appearance desired when the material is dispensed. If the conventional types of propellants are substituted with butane, additional formulation changes may be necessary in order to obtain the right consistency of the dispensed product.

A sample formulation has been selected to illustrate the preparation of aerosol shave creams.

AEROSOL SHAVE CREAM

Portion A:
- 20 Myristic Acid (First Grade)
- 60 Stearic Acid (Emersol 132 Emery Ind.)
- 40 Triethanolamine
- 8 Lanolin Anhydrous U.S.P.
- 5 Cetyl Alcohol Extra N.F. Flakes (Givaudan)

Portion B:
- 35 Sorbo
- 50 Tween 20 (Atlas Powder Co.)
- 50 Tween 80 (Atlas Powder Co.)
- 10 Neutral Soap (John Powell #22)
- 711 H_2O Distilled
- 1 Borax

Portion C:
- 10 Perfume Oil (Givaudan)

1000

Heat Portion A and B to 70°C. until dissolved. Add Portion A to Portion B. Stir slowly until cool and then add Portion C. (Perfume)

Charge with 10% gas mixture:
- 60% Propellant 114
- 40% Propellant 12

100%

A foam product closely related to the aerosol shave cream and containing similar basic constituents is the pressure-dispensed shampoo. A prime requisite of a product of this type is that it have extremely good lathering properties when applied to the hair. In addition, it must be able to produce the required lather in both hard and soft water. A combination of fatty acids can be employed in a product of this type, made up of the stearates, myristates and the oleates, emulsified with triethanolamine; 2% of Versene can also be used in the formulation to insure good application in hard water areas. It is also suggested that 50% triethanolamine lauryl sulphate be added to the formulation because of its excellent lathering properties. The aerosol shampoo should also contain 1% free triethanolamine as a buffering agent to minimize any aspects of corrosion. Other additives and bactericides can be used depending on the end use of the product.

A tentative formulation for a shampoo is as follows:

LATHER AEROSOL SHAMPOO

Portion A:
- 100 Stearic Acid (Emersol 132 Emery Ind.)
- 60 Myristic Acid (First Grade)
- 100 Oleic Acid (233 LL Elain Emery Ind.)
- 10 Lanolin Anhydrous U.S.P.
- 600 Propylene Glycol

Portion B:
- 150 Triethanolamine
- 5 Polyvinylpyrrolidone (General Aniline)
- 5 Versene Regular (Dow Chem. Co.)
- 1470 Triethanolamine Lauryl Sulphate (Stepan Chem. Co.)
- 500 Distilled Water

3000

Heat Portion A to 70°C. until all products are dissolved. Heat Portion B to 70°C. and add to A. Stir until cool then add 0.5% perfume oil.

Charge with 10% gas mixture:
- 60% Propellant 114
- 40% Propellant 12

100%

Another type of shampoo that can be packaged in aerosols with good results is the cream type. This product is based on potassium stearate and triethanolamine lauryl sulphate, with the addition of 1% benzyl alcohol to maintain the viscosity of the product when aerosol packaged.

AEROSOL CREAM SHAMPOO

Portion A:
- 15 Potassium Hydroxide U.S.P.
- 1430 Distilled Water
- 20 Triethanolamine

Portion B:
- 50 Benzyl Alcohol N.F. (Givaudan)
- 805 Triethanolamine Lauryl Sulphate (Stepan Chem. Co.)
- 170 Stearic Acid—Emersol 132 (Emery Ind.)
- 10 Lanolin Anhydrous U.S.P.

2500

Charge with 10% gas mixture:
- 60% Propellant 114
- 40% Propellant 12

100%

Or charge with 5% Propellant 12

It should also be kept in mind that, in most instances, foam products manufactured prior to being loaded in the aerosol container may have a tendency to separate. This is due to the low concentration of soaps in the formulation and the viscosity necessary to allow the material to be dispensed from this type of package. It is, therefore, necessary that the basic material be thoroughly mixed prior to being charged in order to insure good consistency and quality control during production.

Foam products, when charged into containers, may tend to separate on long standing. They can, however, quickly regain their emulsified form by shaking and should be labeled accordingly.

Cologne Foam

An interesting product developed since the introduction of the aerosol is the pressure-packaged cologne foam. This fragrance product should be formulated with materials that have the least amount of inherent odor, so that there will be no direct conflict with the high concentration of perfume oil which is normally contained in the cologne. A concentration of 2% to 4% is used in a base containing triethanolamine stearate soap as well as cetyl alcohol, isopropyl myristate, and glycerine.

AEROSOL COLOGNE FOAM
(Cream Cologne)

Portion A:
- 25 Myristic Acid (First Grade)
- 100 Stearic Acid—Emersol 132 (Emery Ind.)
- 10 Cetyl Alcohol Extra N.F. Flakes

25 Deltyl® Extra (Givaudan-Delawanna)
100 Glycerine U.S.P.

Portion B:
60 Triethanolamine
1660 Water Distilled
20 Benzyl Alcohol N.F.

2000

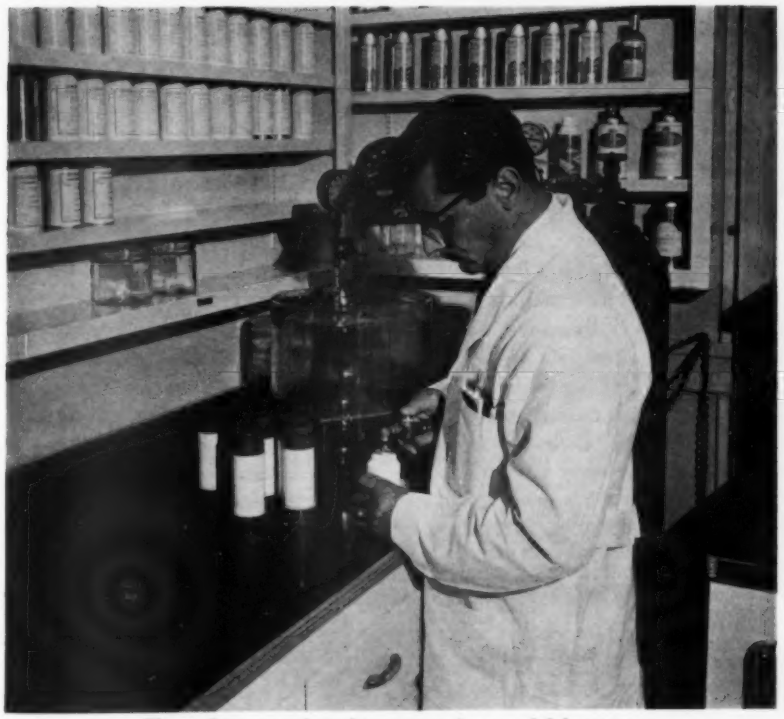
Charge with 10% gas mixture:
60% Propellant 114
40% Propellant 12

100%

A popular product recently packaged in aerosols is cleansing cream. This formulation differs from other aerosol foams in that a minimum amount of foaming is necessary to make a composition which will have the same functional properties as the conventionally packaged product. The product is based on a borax-bees-wax emulsion with myristate and stearate soaps to form the proper emulsion; 1% of benzyl alcohol is necessary in this formulation to prevent the product from solidifying when it is packaged in the aerosol container. A minimum amount of water is used, and the solvent medium is usually equal quantities of mineral oils and isopropyl myristate. The only disadvantage to a product of this type being dispensed in this manner is that it does *not* have the sheen of the conventionally packaged product, even though it does have the same properties and appearance during use.

Most foam-type products are pressurized using a ratio of 90% to 93% base and 7% to 10% propellant. The propellant mixture normally is 60% propellant 114 and 40% propellant 12.

The above-mentioned formula entails the use of chlorinated and fluorinated hydrocarbons as the propellants. The same basic characteristic would prevail if other types of hydrocarbon propellants, such as butane, were used. However, if these same products were pressurized with nitrogen, the formulation would have to be altered in view of the lack of absorption of the propellant. Viscosity is an important consideration when nitrogen is used as a propellant, due to the problem of cavitation if the product were too viscous. This would result in loss of propellant and of the product remaining in the container. The above formulation would normally be too thin for nitrogen propulsion, and it would be necessary to increase the viscosity of the formulation.



The author at work in his company's aerosol laboratory.

Sachets

Pressurized sachets are a fairly recent addition to the family of aerosol products and, because of their multiple application, are becoming extremely popular. One extremely important prerequisite for this type of product is that it should not cause any discoloration. Aerosol sachets utilize concentrations of perfume oils ranging from 0.5% to 3%, and since these products are sprayed directly on fabrics, linens, clothing, etc., the high concentration of perfume oil may have a coloring or discoloring effect on the fabrics thus impregnated.

In most instances, alcohol is used as a carrier and co-solvent for the perfume composition. A dry spray effect can be obtained by selecting perfume ingredients that are soluble in the propellants that are used and by reducing or eliminating the alcohol in the basic formulations.

A suggested formulation for an aerosol sachet—which has also been used for room and personal sprays, etc., depending on the type of perfume used—is as follows:

0.5 Perfume Oil
14.5 Alcohol #40 Anhydrous
85.0 Propellants 11 & 12 (50/50 mixture)

100.0

Deodorants

These personal products have been found to be well suited for pressure packaging, and much work has been done toward this end. The formulation of aerosol deodorants has not created as many problems as have been experienced with the anti-perspirant products. Pressurized deodorants containing bacteriostatic agents have been produced and are enjoying some degree of success. The following is a typical formulation for an aerosol deodorant cologne to be packaged in a plastic-coated glass container:

AEROSOL DEODORANT COLOGNE
(Plastic-Coated Glass Container)
1.00 Glycerine U.S.P.
1.00 Perfume Oil
.40 G-11® (Hexachlorophene U.S.P.) (Sindar)
1.00 Isopropyl Myristate

(*Continued on Page* 88)

Milwaukee Journal Study Rates 3 Aerosol Products

NEW aerosol products in an established product category, if they are introduced with enough advertising fanfare, often cut into the sales of the established leader. This fact was revealed with the issuance of the 1960 Edition of "Consumer Analysis," a yearly survey of buying habits in Metropolitan Milwaukee (Wis.), compiled and edited by *The Milwaukee Journal*. The new study covered three major aerosol products, shaving creams, hair sprays, and dessert toppings. Of the three all the leaders found themselves unable to defend their position against incursions by newer brands.

For instance, in the survey of dessert toppings, the long established leader "Reddi-Whip" lost a good deal of its sales preference to a more economically priced new competitor, Lever Brothers' "Lucky Whip." Two other newcomers, "Quick Whip" and "Triple Whip," also recorded gains, despite a big increase in the "don't know the brand" purchasers.

Helene Curtis, the established Milwaukee leader in hair spray sales

(*Continued on Page* 88)

Hair Spray in Pressurized Cans

Two Different Questions Used in Two Comparable Samples

Do you buy hair spray in pressurized cans? * (Do NOT include hair dressings.) ☐ YES ☐ NO ..... BRAND BOUGHT LAST

Have you bought hair spray in pressurized cans within the past 30 days? (Do NOT include hair dressings.) ☐ YES ☐ NO ..... BRAND BOUGHT LAST

Per Cent and Number of Buyers Based on Two Comparable Samples

Year	Buyers Per Cent	Buyers Number	Buyers within 30 days. Per Cent	Buyers within 30 days. Number
1960	40.7%	136,264	23.2%	77,674
1959	42.5	139,630		
1958	37.6	121,674		
1957	38.0	119,597		
1956	28.6	87,144		

Brand	PER CENT WHO USE EACH BRAND: . . . of all households buying hair spray in pressurized cans. 1960	1959	1958	1957	. . . of those buying within 30 days. 1960	Per cent of stores stocking at time of spot check. Independent Grocers 1960	1959	Chain Grocers 1960	Independent Druggists 1960	Chain Druggists 1960	Dept. Stores 1960
Helene Curtis	24.3%	28.6%	37.6%	51.4%	24.5%	40.5%	53.5%	Ⓐ Ⓝ Ⓚ ◈ Ⓡ	96.5%	Ⓦ	Ⓑ Ⓖ Ⓢ
†Adorn	17.4	16.5	12.2	.....	19.3	35.7	52.0	Ⓐ Ⓝ Ⓚ ◈ Ⓡ	85.1	Ⓦ	Ⓑ Ⓖ Ⓢ
Revlon	14.8	16.4	17.4	19.7	14.0	21.1	35.5	Ⓐ Ⓝ Ⓚ ◈ Ⓡ	85.1	Ⓦ	Ⓑ Ⓖ Ⓢ
Breck	12.0	9.1	6.2	5.0	8.5	16.2	28.5	Ⓐ Ⓝ ... ◈ Ⓡ	82.8	Ⓦ	Ⓑ Ⓖ Ⓢ
Avon	3.4	2.8	2.3	2.5	2.8	.....	.....	.....	.....	....	.....
†Lanolin Plus	2.2	1.1	.....	.....	2.0	4.3	.....	..... ◈ ...	34.5	Ⓦ	Ⓑ ... Ⓢ
†Lustre-Creme	2.2	1.4	.....	.....	1.6	5.4	2.5	.... Ⓝ ... ◈ Ⓡ	58.6	Ⓦ	Ⓑ ... Ⓢ
†Max Factor	2.0	5.4	3.5	.....	2.0	7.0	18.0	.....	75.9	Ⓦ	Ⓑ Ⓖ Ⓢ
†Nestle	1.7	2.5	3.1	.....	3.4	1.6	.5	Ⓐ Ⓝ ... ◈ Ⓡ	3.4	....	Ⓑ ... Ⓢ
Hazel Bishop	1.4	1.6	2.3	1.7	1.8	3.2	15.0	..... ◈ Ⓡ	13.8	Ⓦ	Ⓑ Ⓖ Ⓢ
†Caryl Richards	1.0	1.1	.....	.....	1.0	.....	.....	.....	.....	....	.....
†Charles Antell	1.0	.....	1.1	2.1	1.2	.....	.....	Ⓐ Ⓝ ... ◈	25.3	Ⓦ	Ⓑ ... Ⓢ
†Richard Hudnut	1.0	.....	1.5	.....	1.0	.....	.....	.....	40.2	Ⓦ	.....
Don't Know	3.3	1.1	1.5	.9	4.3	.....	.....	.....	.....	....	.....
‡Miscellaneous	12.3	11.3	12.2	16.7	13.0	.....	.....	.....	.....	....	.....
Total Sample Each Year	2,167	2,000	2,000	2,000	2,127	185	200		87		
Base (Number Buying)	883	849	752	761	493						

•National question asked identically in 21 Consumer Analysis markets.
†Used by less than 1% in previous years and therefore included under "Miscellaneous" in these years.
‡Miscellaneous brands, 1960: Buyers, 53 brands; 30 days, 35 brands.
Key to Chain Grocers—Ⓐ A. & P. Ⓝ National Food Stores. Ⓚ Krambo. ◈ Kohl's. Ⓡ Red Owl.
Key to Chain Drug and Department Stores—Ⓦ Walgreen's. Ⓑ Boston Store. Ⓖ Gimbels. Ⓢ Schuster's.

Shaving Cream in Pressurized Cans

Two Different Questions Used in Two Comparable Samples

Do you use a shaving cream that comes in pressurized cans? • ☐ YES ☐ NO ..... BRAND BOUGHT LAST

Have you bought shaving cream in pressurized cans within the past 30 days? ☐ YES ☐ NO ..... BRAND BOUGHT LAST

Per Cent and Number of Buyers Based on Two Comparable Samples

Year	Buyers		Buyers within 30 days.	
	Per Cent	Number	Per Cent	Number
1960	34.8%	116,510	30.3%	101,444
1959	32.1	105,461		
1958	29.3	94,615		
1957	26.6	83,718		

Brand	PER CENT WHO USE EACH BRAND: ... of all households buying shaving cream in pressurized cans. 1960	1959	1958	1957	... of those buying within 30 days. 1960	Per cent of stores stocking at time of spot check. Independent Druggists 1960	1959	Chain Druggists 1960	Dept. Stores 1960
Rapid Shave	22.4%	18.8%	17.2%	18.5%	22.0%	93.1%	97.0%	Ⓦ	ⒷⒼⓈ
Rise	19.2	20.1	18.4	20.3	18.9	98.8	97.0	Ⓦ	ⒷⒼⓈ
Aero Shave	11.5	10.4	9.4	9.8	9.5	65.5	57.0	Ⓦ	Ⓑ ... Ⓢ
Burma Shave	9.0	9.3	11.1	9.4	7.6	87.4	83.0	Ⓦ	ⒷⒼⓈ
Gillette Foamy	7.9	6.4	9.9	5.1	9.6	93.1	95.0	Ⓦ	ⒷⒼⓈ
Mennen's Foam	5.2	9.0	8.9	10.0	5.3	80.5	89.0	Ⓦ	ⒷⒼⓈ
Old Spice	4.2	5.6	5.1	4.1	6.4	85.1	82.0	Ⓦ	ⒷⒼⓈ
Colgate Barber Shave	3.4	4.4	1.9	4.3	5.3	89.7	85.0	Ⓦ	ⒷⒼⓈ
†Barbasol	2.6	.....	.....	.....	1.7	55.2	.....	Ⓦ	ⒷⒼⓈ
Noxzema	2.3	4.7	3.2	3.4	2.8	79.3	77.0	Ⓦ	ⒷⒼⓈ
Rexall	2.3	1.7	1.5	1.3	1.4	12.6	.....	....	.....
Avon	1.3	1.7	2.4	1.1	2.2	.....	.....	....	.....
†Williams Instant Lather	1.3	.....	2.6	1.7	1.9	58.6	.....	Ⓦ	Ⓑ ... Ⓢ
Don't Know	2.5	2.0	3.2	1.5	2.0	.....	.....	....	.....
‡Miscellaneous	5.0	6.1	5.6	9.8	3.9	.....	.....	....	.....
Total Sample Each Year	2,167	2,000	2,000	2,000	2,127	87	100		
Base (Number Buying)	755	642	586	532	645				

‡Miscellaneous brands, 1960: Buyers, 22 brands; 30 days, 16 brands.

Dessert Toppings in Pressurized Cans

Three Different Questions Used in Three Comparable Samples

Do you buy dessert toppings in pressurized cans? • ☐ YES ☐ NO ..... BRAND BOUGHT LAST

Have you bought dessert toppings in pressurized cans within the past 30 days? ☐ YES ☐ NO ..... BRAND BOUGHT LAST

Have you bought dessert toppings in pressurized cans within the past 7 days? ☐ YES ☐ NO ..... BRAND BOUGHT LAST

Per Cent and Number of Buyers Based on Three Comparable Samples

Year	Buyers		Buyers within 30 days.		Buyers within 7 days.	
	Per Cent	Number	Per Cent	Number	Per Cent	Number
1960	25.0%	83,700	18.4%	61,603	8.2%	27,454
1959	22.5	73,922				

Brand	PER CENT WHO USE EACH BRAND: ... of all households buying dessert toppings in pressurized cans. 1960	1959	.....	.....	... of those buying within 30 days. 1960	... of those buying within 7 days. 1960
Reddi-Whip	41.6%	50.1%	.....	.....	35.5%	37.3%
Lucky Whip	21.4	14.7	.....	.....	24.8	30.0
Qwip	5.5	6.0	.....	.....	8.2	8.5
Top Whip	4.3	4.2	.....	.....	2.6	5.6
Parti Day	4.2	10.9	.....	.....	5.9	8.5
†Quick Whip	1.5	.....	.....	.....	.5	1.1
†Triple Whip	1.1	.....	.....	.....	2.0	1.1
Dairy Whip	1.1	1.8	.....	.....	2.3	1.1
Don't Know	13.3	5.8	.....	.....	12.8	1.7
‡Miscellaneous	6.1	7.3	.....	.....	5.9	5.1
Total Sample Each Year	2,167	2,000	.....	.....	2,127	2,165
Base (Number Buying)	541	449	.....	.....	391	177

†Used by less than 1% in previous years and therefore included under "Miscellaneous" in these years.
‡Miscellaneous brands, 1960: Buyers, 18 brands; 30 days, 14 brands; 7 days, 7 brands.

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Aerosol Regulations

CONTRARY to general expectation, there are very few countries where regulations exist specifically for aerosols, but there are at the present a number of draft regulations and recommendations in other countries which will undoubtedly form the basis of future legislation and which are therefore also referred to in this lecture.

Austria

Pressurized containers appear to be governed by Order No. 83 (D.K.V.) of 17th April 1948, but containers which do not contain more than 150g dichlorodifluoromethane are not subject to the restrictions of this order (Paragraph 28).

Belgium

All dispensers with a capacity lower than 500cc, which do not contain gases for medical uses, are excluded from all regulations.

Finland

By a decree of the Ministry of Commerce and Industries dated 29th July 1957, the following regulations apply to the manufacture of containers for aerosol purposes:

1. The test pressure is gauge pressure. The containers must be capable of withstanding without bursting (or leakage) a pressure of 1½ times the pressure of the contents at 50° C. (122° F.).
2. The test pressure must be at least 10 kg/cm² and not more than 18 kg/cm².
3. Containers with a dispensing pressure of over 12 kg/cm² (equivalent to a test pressure of 18 kg/cm²) are not permitted.
4. Propane, butane and vinyl chloride are permitted as propellants in containers with a capacity not exceeding 600 cc.

France

No general regulations are in force, but the use of chlorinated solvents such as trichlorethylene, perchlorethylene and methylene chloride is subject to the regulations concerning poisonous materials, which merely ask for green labels, with an indication of the name of the product, and which must mention "dangerous, noxious vapours."

Exemptions:

Trichlorethylene and perchlorethylene.

Formulations containing a maximum of 5% of either solvent.

Trichlorethylene.

Containers not exceeding 100 cc.

Methylene Chloride.

1. Formulations containing a maximum of 5% methylene chloride.
2. Products containing a maximum of 30% methylene chloride when such products, in quantities not exceeding 200 g, are contained in pressurized dispensers.

Germany

The draft drawn up by the German Pressure Gas Committee entitled "Regulations Concerning the Manufacture and Filling of Pressurized Dispensers" dated Oct. 3, 1954, is expected to come into force shortly. The following are the salient points:

1. At least one of the ends must be domed.
2. The domed end must deform prior to the failure of the side seams and/or the unraveling of the end double seam.
3. All containers must be capable of withstanding 10 kg/cm² (approx. 150 lb.).
4. *Manufacturing Tests.*
   (a) Samples: 5 containers per 1,000.
   (b) No deformation of any sort by hydraulic testing to pressure mentioned above.
   (c) If testing with hydraulic means is unsuitable, then liquefied gas may be employed. In that case, heating should be carried out in a water bath to a temperature at which the vapor pressure of the gas exceeds the testing pressure by approximately 10%.
5. *Coding.* Each container must be coded in such a manner that the manufacturer can be identified subsequently. This must also be carried out with containers which are supplied unlacquered, by stamping with a color which remains visible after subsequent lacquering.

By A. Herzka, B.Sc., A.R.I.C.*
Pressurized Packaging Consultants Ltd.
London, N.W. 11, England

... and their anomalies

6. *Precautionary Notices* (i.e. warning notices) must appear on the containers before they are marketed.
7. Propellants. Only a certain number of propellants are permitted. These are propellants 12, 21, 22, 114, carbon dioxide, propane, butane, methyl chloride, vinyl chloride and, judging by a footnote, propellant 11.
8. *Working Pressures.* The pressure in the containers must not exceed 6.5 kg/cm² (approx. 6½ ats). The pressure measured is the gauge pressure of the propellant or of the mixture at 50° C. (122° F.). If pressure filling is carried out, the air must be removed should the trapped air increase the internal pressure above the limit of 6.5 kg/cm².
9. *Maximum Fill.* The maximum fill is such that the container is only filled to the extent of 95% at 60° C. (140° F.).
10. *Valves.* Valves must also be tested before dispatch to the customer, and there must be a certificate to that effect.
11. *Testing of the Filled Dispenser.*
    (a) Water bath test at 55° C. (131° F.) for such a length of time that the contents *does* reach the testing temperature.
    (b) Each valve must be tested individually by spraying.
    (c) 5% of the dispensers must be weighed in order to check accuracy of fill, but owing to the difference in weight between certain types of containers, variations of +/—5g are permitted.
12. Maximum capacity — approx. 600 cc.

These draft regulations are undoubtedly most extensive, and it is therefore all the more surprising that there is no reference to glass containers.

Norway

There are no regulations, but the United States regulations, presumably those of the Interstate Commerce Commission, are being observed.

No pressurized product is permitted to contain more than 25% methylene chloride, unless it is labeled as "poisonous."

South Africa

No specifications are in existence at the moment, but the South African Bureau of Standards has produced the following draft specification for "Packs for Pressurized Dispensers," dated Oct. 2, 1959:

Pressurized Dispensers

A metal, glass or plastic shell container equipped with a dispensing valve, the construction and design being strong enough to retain the compressed or liquefied gas that acts as a propelling agent for the discharge of the contents through the valve. For the purposes of this specification, dispensers shall be divided into the following classes:

Low Pressure Dispensers. Shall be used for mixtures which, when heated to 130° F., do not build up pressures in excess of 110 p.s.i.g. They shall be of metal, glass or plastic. Glass dispensers shall be adequately protected by means of metallic outers, such as aluminum extrusions or plastic coatings which shall be of adequate thickness and shall not become brittle on aging.

Medium Pressure Dispensers. Shall be used for mixtures which, when heated to 130° F., build up pressures in excess of 110 p.s.i.g. but not above 165 p.s.i.g. They shall be of metal only.

Pressurized Metal Dispensers in Wooden or Corrugated Board Boxes

Dispenser. Each low pressure dispenser shall be capable of withstanding an internal pressure of 125 p.s.i.g. with no bulging of either end or leakage. One out of each lot of 5,000 dispensers, successively produced, shall be tested to destruction with internal hydraulic pressure and shall not burst below 165 p.s.i.g. pressure.

Each medium pressure dispenser shall be capable of withstanding an internal pressure of 180 p.s.i.g. with no bulging of either end or leakage. One out of each lot of 5,000 dispensers, successively produced, shall be tested to destruction with internal hydraulic pressure and shall not burst below 210 p.s.i.g.

* Delivered at the International Aerosol Congress, Dusseldorf, 28th April 1960.

Filled Dispenser. After charging each dispenser shall be heated in a water bath to 130° F. and shall not leak nor be distorted.

The valve or discharge mechanism of each dispenser shall be protected in such a manner that accidental discharge cannot occur.

Drop Test. A medium or low pressure dispenser, when charged in the normal manner, shall be capable of being dropped vertically (a) end down, (b) top down and (c) sideways from a height of 2 ft. 6 in. onto a hardwood surface, without leaking or breaking.

Complete Pack. The dispensers shall be packed in corrugated board or wooden boxes, and when tested in accordance with regulations the pack shall not fail.

Pressurized Plastic Dispensers in Wooden or Corrugated Board Boxes

Dispenser. Glass shall be used only for low pressure dispensers and each dispenser shall be capable of withstanding a continuous internal pressure of 125 p.s.i.g. One out of each lot of 5,000 dispensers, successively produced, shall be tested to destruction with internal hydraulic pressure and shall not burst below 165 p.s.i.g. pressure.

Filled Dispenser. After charging each dispenser shall be heated in a water bath to 130° F. and shall not leak or burst.

The valve or discharge mechanism of each dispenser shall be protected in such a manner that accidental discharge cannot occur.

Drop Test. A glass dispenser when charged in the normal manner shall be capable of being dropped once virtually onto any portion from a height of 2 ft. 6 in. onto a hardwood surface without fragments of glass completely piercing the metallic outers or plastic coatings and becoming a flying hazard.

Complete Pack. The dispensers shall be packed in wooden or corrugated board boxes with adequate cushioning so that when tested in accordance with the regulations the pack shall not fail.

Pressurized Glass Dispensers in Wooden or Corrugated Board Boxes

Dispenser. Plastic shall be used only for low pressure dispensers and each dispenser shall be capable of withstanding a continuous internal pressure of 125 p.s.i.g. One out of each lot of 5,000 dispensers, successively produced, shall be tested to destruction with internal hydraulic pressure and shall not burst below 165 p.s.i.g. pressure.

Filled Dispenser. After charging each dispenser shall be heated in a water bath to 130° F. and shall not leak or burst.

The valve or discharge mechanism of each dispenser shall be protected in such a manner that accidental discharge cannot occur.

Complete Pack. The dispenser shall be packed in wooden or corrugated board boxes and when tested in accordance with the regulations the pack shall not fail.

Comment:

It is commendable that separate standards are being proposed for both glass and plastic dispensers, and that all glass dispensers must have an outer, protective coating which, in turn, must be able to withstand the drop test.

It is understood that in South Africa there has been contentious dispute between the local packers and container manufacturers on the one side, and the representatives of South African railways on the other, concerning the temperature to be set for test purposes and specifying internal pressure. The representatives of the railways have set the temperature at 149° F., and their opponents have sought to use the figure of 130° F., which is used as the maximum in the United States. This latter figure of 130° F. has been accepted provisionally, and the South African Bureau of Standards is reported to be carrying out some tests to determine whether temperatures inside filled dispensers which are transported by the railways in the Union exceed 130° F.

Switzerland

No regulations are in force, except that vinyl chloride is not permitted as a propellant.

United Kingdom

There are no specific regulations at the moment, but the Home Office "Gas Cylinder and Containers Committee" is known to be considering non-returnable containers.

The Food Standards Committee Report on Preservatives in Food, published at the end of 1959, comments as follows about the use of nitrous oxide for dispensing whipped cream: "Although moist nitrous oxide under very high pressures has been shown to have a marked bactericidal action, at the much lower pressure employed in making whipped cream there is no evidence of bactericidal effect. It should not, therefore, in our view be regarded as a preservative." The comment is also made that "no health hazard is presented." The dairy industry of Great Britain is now hoping that these recommendations will be made law in the not too distant future. Unfortunately, the bulk of this report deals with matters of a controversial nature (nothing to do with pressurized food packs), and this is likely to increase the delay.

The British Transport Commission in their "List of Dangerous Goods and Conditions of Acceptance by Merchandise Trains" (published in July, 1957), mentions both propellants, albeit only in cylinders, and other materials such as alcohol, insecticides, enamels, paints, etc. The latter type are included as "substances giving off inflammable vapor" (Section 5). The criterion for classification under this section is flashpoint, and more will be said about this aspect later.

The absence of regulations specifically appertaining to this industry is the cause of the following anomalies: The manufacture of paints containing nitrocellulose, and other cellulose derivatives, is governed by the Nitrocellulose Regulations; but no restrictions are placed on the subsequent manner of storage of the finished article which contains these cellulose

derivatives, so long as no petroleum derivatives are present. Any paint, however, which contains petroleum derivatives such as xylene, toluene, etc., whether it contains nitrocellulose or not, comes within the Petroleum (Consolidation) Act 1928, and storage even on the retailers' premises is governed by the same act and is subject to numerous regulations. Thus the storage of pressurized nitrocellulose paints which will normally be based on ketones and/or esters is not subject to any restrictive storage conditions, but a pressurized alkyd formulation which would normally contain xylene, toluene and the like does have to be stored specially.

Likewise, butane, though inflammable, does not come into the province of the Petroleum (Consolidation) Act 1928, because at the time when the act was published (1928) no provision was made for the determination of the flash-point of butane. Thus butane products are possibly subject to the rules of the requisite local authorities, but do not come under petroleum regulations.

United States of America

The United States, being the first country to exploit pressurized packages, as would only be expected, possesses the most extensive regulations at present known, but, surprising as it may sound, there does not appear to be that degree of unanimity between the various states which one would expect by this time, and within the scope of this paper it is impossible to deal with the individual state laws as they affect this industry. It is therefore proposed to summarize briefly the Interstate Commerce Commission regulations as they pertain to pressurized packs and which are found in H. A. Campbell's Tariff No. 10 (19th June 1957), together with subsequent supplements. The I. C. C. regulations, as they are known for short, do, of course, govern interstate transport, and any product which is shipped from state to state must conform with these regulations. I have reason to believe that whenever reference is made to the U. S. regulations in a general manner, it is a reference to the I. C. C. regulations. Figures 1, 2 and 3, reproduced through the courtesy of the Pennsalt Chemical Corporation, summarize these regulations. The best source of information for United States regulations is the booklet entitled "Agencies and Regulations of Interest to the Aerosol Industry," published in 1958 by the C.S.M.A. The booklet also contains details of the Air Transport Restricted Articles Tariff No. 6B, which governs the transportation of restricted articles by air. Participating carriers in this tariff are B.E.A., B.O.A.C., Aer Lingus, Air France, Eagle Airways, El Al, Hunting Clan, Malayan Airways, Pakistan International Airlines, Qantas, S.A.S., Air India and the various American airlines.

The alphabetical list of restricted articles, compiled by the C.S.M.A. as containing items of probable interest to aerosol shippers, contains the following: Freon 11, 12, 11/12 mixture, 114 are all permitted to be carried to the extent of 150 lbs. in passenger aircraft and 300 lbs. in cargo aircraft. The same applies to fire extinguishers, insecticides and non-flammable compressed gases.

But there is no individual listing, other than of the insecticides, of pressurized packs containing liquids, which in themselves would be classified as flammables. That is to say, alcohol is listed individually, but not in combination with a liquefied gas, as would be the case with hair lacquer.

An anomaly in the U. S. regulations is the absence of any regulations concerning the use of unprotected glass containers, the use of which, as you all know, constitutes extreme hazard, and reference to this may, of course, be found in other publications. It would appear that in the U. S. by and large there is a tendency to ignore the danger of using unprotected glass dispensers.

THE FOREGOING just about sums up the present position, but there is one aspect where aerosol associations could be of help to the industry, and that concerns flash-point.

Broadly speaking, there are three aspects of potential hazards in aerosol packs — bursting, flammability and toxicity. The first of these hazards can generally be overcome by adequate manufacturing tests, that is to say, adequate testing during the manufacture of the container which is to contain the formulations, and also testing at elevated temperature after filling—aspects which are fully recognized in the Finnish and U. S. regulations and in the German and South African drafts. Nevertheless, this hazard does persist to a certain extent after sale, if the consumer fails to observe the warning notices on the label.

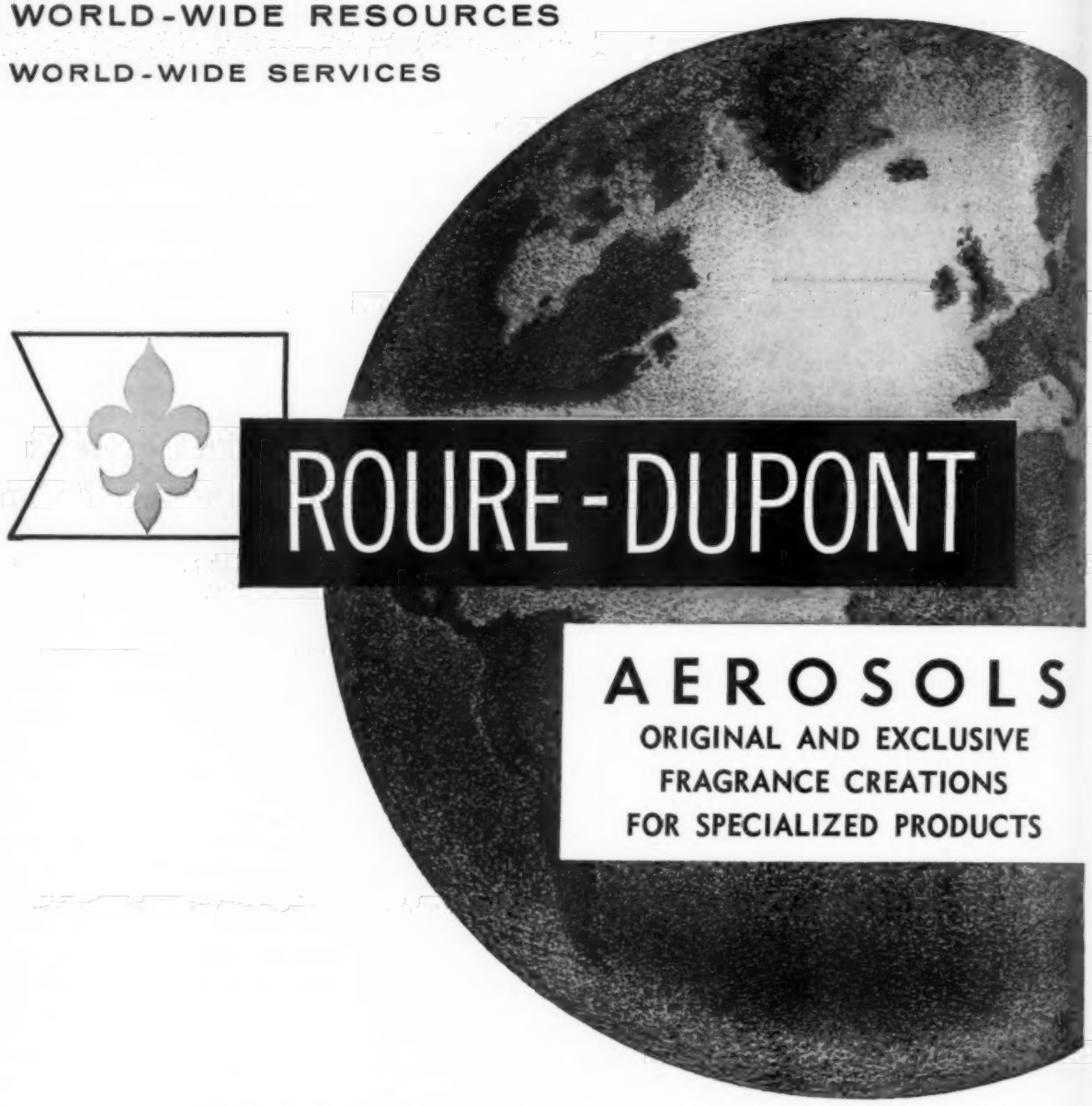
Toxicity is one aspect about which there is little argument, as the propellants themselves have been adequately evaluated.

Now let us turn to the problems associated with flammability as they apply in the U. S. In the latest edition of the I.C.C. regulations, the flammability situation for aerosol products is as follows: The product must be tested by the Flame projection and sustaining tests, the Open Drum and Closed Drum tests. If any one of these is negative, the product is classified as non-flammable and it may be shipped in interstate commerce. If the product is flammable by all four tests, then its flash-point must be determined by the Tag open test method. If the flash occurs below 20° F., the product cannot be shipped. If the flash is above 20° F., then the product can be shipped and no special labeling is required. On the other hand, some of the states and municipalities have flammability regulations based on flash-points alone, and it is unfortunate that most of these people do not understand the problems concerned with aerosol products, and that the flash-point tests are not realistic. Quite often the criterion of flammability is based on a flash-point in the room temperature range such as 70° F. or thereabout. The majority of regulations in which there is a reference to flash-

(*Continued on Page* 84)

WORLD-WIDE RESOURCES

WORLD-WIDE SERVICES



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TGA Meets

Bright future seen for toilet goods as experts evaluate next decade

WITHIN ten years, consumer buying of toiletry products will exceed the 1959 volume by 65%, James O. Peckham, executive vice-president of the A. C. Nielsen Co., Chicago, told the annual convention of the Toilet Goods Association at Poland Spring, Maine, June 27-9. Tracing the growth of selected product groups in the toiletry field—dentifrices, shampoos, deodorants, and the like—Mr. Peckham reported that consumer buying over the last five year period is up a whopping 48%—a rate of gain almost half again as great as the composite consumer buying trend of all commodities.

He reported that the growth of consumer toiletries purchases is about 50% stronger than either the all-commodity or the consumer disposable income trend. As reasons for this, he suggested:

"1. New brands, improvements in established brands, additional types of the same brand, and improved packaging have stimulated additional consumer buying.

"2. Increased leisure time has lead to increased social contacts and thus to increased consumer buying of toiletries.

"3. The sharp increase in the amount of money people have left to spend after taking care of the basic necessities of food, shelter, and clothing—something we call 'discretionary income'—has stimulated consumer buying of toiletries to a greater extent than would be warranted by mere expansion of population and consumer income alone.

"4. The increased display or 'Exposure for Sale' of toiletries brought about by increased distribution of nationally advertised brands of toiletries, in the food store, and also by increased display in drug and variety stores as more of these outlets have gone over to a self-service operation."

Mr. Peckham discounted the food store development as a decisive factor in the growth, pointing out that consumer buying of toiletries through drug stores has increased—"and rather substantially"—coincident with the increase of consumer buying of toiletries through food stores. Going into the matter further, he pointed out that the individual large independent drug store accounts for 50% more consumer buying of toiletries than the average chain food store and more than twice that of the average independent food supermarket.

Turning to the next decade, Mr. Peckham predicted a 65% increase in consumer buying of toiletries in 1969 over the figure recorded in 1959. He forecast larger retail outlets. And finally, he predicted that old familiar products might come out in different versions for each age group.

THE theme of what the 60's will be like from the standpoint of the cosmetics industry was also discussed by William L. Fort, manager of drug-toiletry sales and promotion for *Life* magazine. "New age groups especially teen-agers and young married couples, he pointed out, "will emerge as more important consumer markets in a growing, changing population. There'll be dynamic changes in the working force and in working habits; the number of white-collar workers and women in business will rise sharply. There will be more leisure time, a higher level of education, and ever-higher standards of taste—and these in turn will produce a new kind of consumer—whose different spending patterns are going to be an important part of your future."

He quoted a *Fortune* magazine prediction that there will be an average family income in 1970 of nearly $7500 a year, or an increase in real spending power of about $1500 per family. "Upper-income families—those earning more than $7500 a

Arthur E. Johnston, Colgate, outgoing TGA president, and Jean Despres, Coty, new TGA president.

Jean Despres Elected President

Jean Despres, executive vice-president of Coty, Inc., New York perfume marketer, was elected president of the Toilet Goods Association at its annual convention June 27-29 at Poland Spring, Me. George L. Schultz, president of Shulton, Inc., formerly a TGA director, was elected a vice-president with Oscar Kolin, Helena Rubinstein, Inc.; J. I. Poses, D'Orsay Sales Co.; and D. H. Williams, Sterling Drug Co., re-elected as vice-presidents.

New directors included Hal Grafer, vice-president in charge of marketing of the J. B. Williams Co.; Paul J. Martinot, vice-president of Caron Corp.; L. W. Schleuse, president of Texas Pharmacal Co., and Raymond Stetzer, vice-president, research, for Revlon, Inc.

year—will double during the sixties, and will control three-fifths of all expendable dollars. All these factors, combined with longer life and an ever rising birth rate," he suggested, "will assure a tremendous potential market for the toiletries industry.

"Two marketing potentials are immediately apparent: there'll be a much larger demand for goods and services aimed at the career girl, and there'll be a vast new market for working wives, whose independent incomes will give them more freedom in the use of their purchasing power. So the lucrative market of well-groomed working women—who have to look their best—is going to get much bigger in the sixties."

J. B. BREWER, executive director of the Toiletry Merchandisers Association, predicted that toiletry sales in food stores will jump 150% by 1969, and that changes in merchandising methods will be one of the chief instruments of growth. "Trained groups of cosmetic demonstrators will be used to introduce self-serve cosmetic departments in supermarkets, and they will be brought back to each store often enough to keep interest at a high pitch. Certain supermarkets will have separate cosmetic departments with trained cosmeticians constantly in attendance."

Mr. Brewer forecast that products will be improved and new ones will be developed. "The suppliers will recognize the increased importance of self-selection selling in both the food and the drug field and the increasing importance of their consumer packages in self-service outlets."

HOUSE-TO-HOUSE selling of toiletries has risen in volume from $118 million in 1950 to $341 million in 1959, and will most likely continue to grow at a good rate. This prediction was made by Norman C. Chadwick, vice-president of merchandising and sales promotion for Avon Products, Inc., New York, a leading marketer in the field. He said that house-to-house firms have accounted for about 14% of the toiletries volume in 1950, but by 1959 were taking 20% of the market. He revealed that for the first four months of 1959 Avon's business is up about 20%.★

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Linde to Build in Canada

Linde Co., Division of Union Carbide of Canada, Ltd., recently announced plans to build a new liquid oxygen plant at Trafalgar Township, near Oakville, Ont. When completed, it will also produce nitrogen, an aerosol propellant.

Hazardous Label Bill Passed and Signed by President

AEROSOL marketers of hazardous household products last month began to review their labels in the wake of passage of the Federal Hazardous Substances Labeling Act. Passed at the end of June by both houses, the measure was signed by the President in July.

Within six months of passage of the bill, marketing companies will have to comply with its provisions, after which they will face the prospect of seizures, court action, and fines. *Oil, Paint & Drug Reporter* (July 4) reports that there is talk in Washington that the deadline might be extended for as much as 18 months in some instances.

The new law is limited to products that are "hazardous" and packaged for household use. It excludes foods, drugs, and cosmetics (which come under the Food, Drug, & Cosmetic Act), economic poisons subject to the Insecticide, Fungicide, and Rodenticide Act, and fuels stored in containers and used for heating, cooking, or refrigeration.

Key to definition of the new law is interpretation of the word "hazardous," which according to the law must meet two requirements. The House Interstate Commerce Committee, said that first a hazardous substance must be "toxic, corrosive, an irritant, a strong sensitizer, flammable, or a substance which generates pressure through decomposition, heat, or other means. Secondly, it must be a substance (or mixture) which may cause substantial personal injury or substantial illness during or as a proximate result of any customary or reasonably foreseeable handling or use, including reasonably foreseeable ingestion by children."

The House Committee pointed out that the key words "substantial" are not intended to cover "wholly insignificant or negligible illness or injury, such as the very temporary indisposition that a child may suffer from eating a piece of the standard type of toilet soap."

Aside from normally encountered label warnings, the chief stumbling blocks for the aerosol marketer appear to be the requirement that the common chemical name of the hazardous substance be included (many formulas are secret), together with instructions, when necessary, for first-aid treatment.

The complete label must include the following:

Name and place of business of the manufacturer, packer, distributor, or seller.

The common or usual name, or the chemical name if there be no common or usual name, of the hazardous substance, or of each component which contributes substantially to its hazard, unless the Secretary by regulation permits or requires the use of a recognized generic name.

The signal word "DANGER" on substances which are extremely flammable, corrosive, or highly doxic.

The signal word "WARNING" or "CAUTION" on all other hazardous substances.

An affirmative statement of the principal hazard such as "flammable," "vapor harmful," "causes burns," "absorbed through skin," or similar wording descriptive of the hazard.

Precautionary measures describing the action to be followed or avoided.

Instruction, when necessary or appropriate, for first-aid treatment.

The word "POISON" for any hazardous substance which is defined as "highly toxic."

Instructions for handling and storage of packages which require special care in handling or storage.

The statement "KEEP OUT OF THE REACH OF CHILDREN," or its practical equivalent.

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needs a "strong bench". When you buy Duraglas containers or their closures from Owens-Illinois, you acquire the rights to a "strong bench" of technical and merchandising skill.

On call are specialists in designing packages and making them perform efficiently in your plant and where your products are sold.

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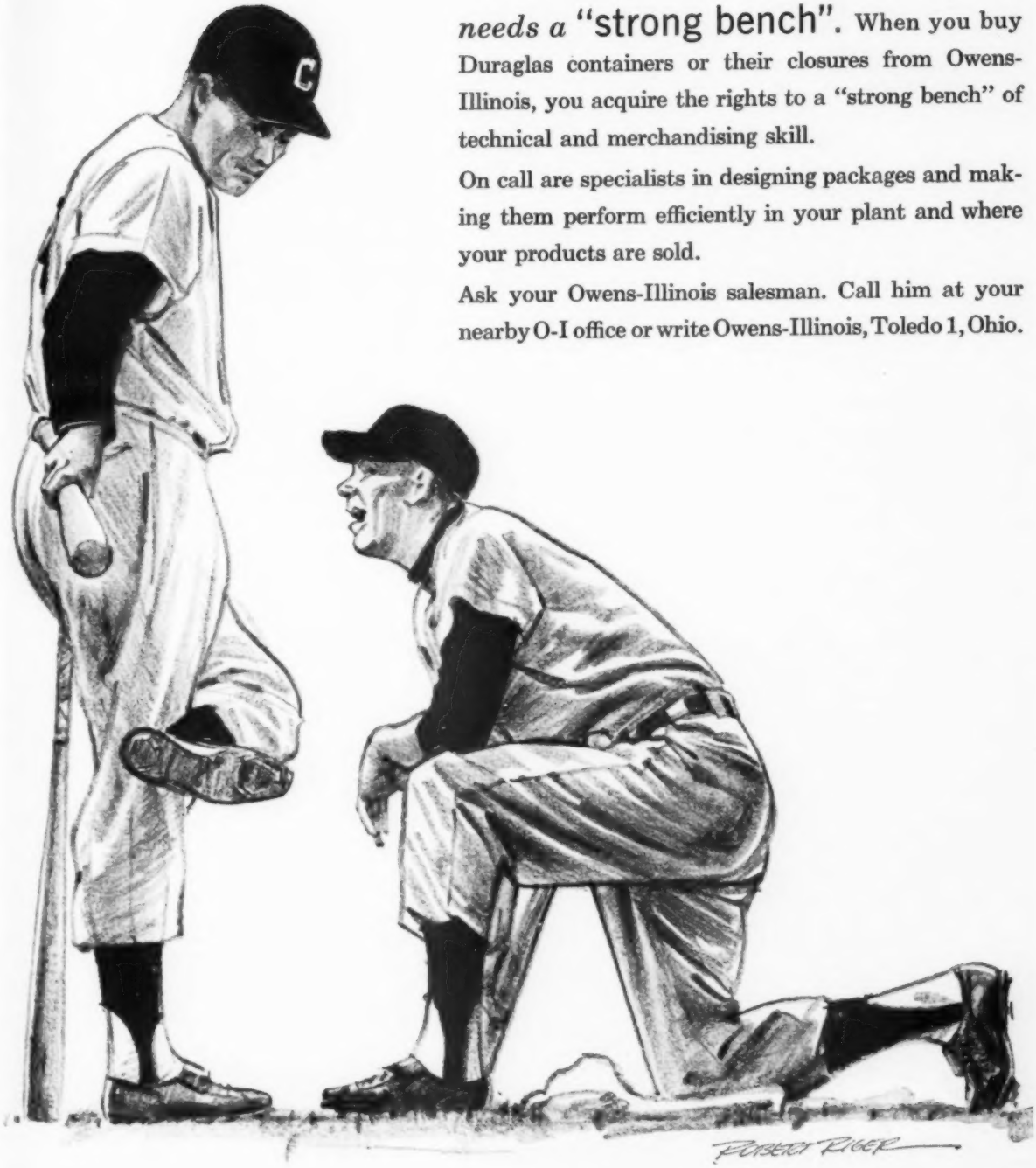

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Italian Industry Seen Growing Rapidly

Walter C Beard, Jr., left, Risdon's director of research, demonstrates to Dr. Mario Ramella, president of Solfrene, S.p.A., how Risdon's electronically controlled cold-filling apparatus is used in laboratory testing of glass bottle valves.

THE Italian aerosol market is booming, with insecticides, suntan lotions, and just lately pharmaceuticals showing decided strengths. This was revealed recently in an exclusive *Aerosol Age* interview with Dr. Mario Ramella, president of Solfrene S.r.l., Milan, Risdon valve licensee in Italy and a leading custom filler in that country. In June Dr. Ramella completed a two-week visit to the United States, mainly to study production and quality control techniques at Risdon's Naugatuck plant, but also to visit some of the major Eastern aerosol fillers.

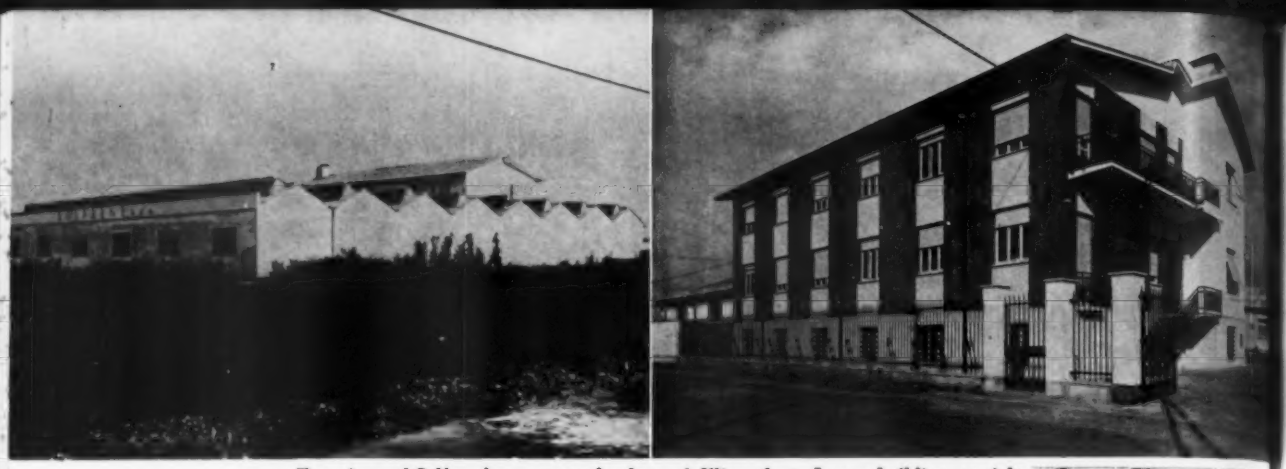
Dr. Ramella's visit to the United States was occasioned by an increase in his firm's license area. Solfrene will henceforth have the exclusive Risdon license for not only Italy, but also Belgium, the Netherlands, Luxembourg, Germany, Brazil, plus a non-exclusive license for Switzerland. On his U. S. visit, Dr. Ramella revealed plans to issue a Solfrene sub-license to Aerosol do Brasil (Astrea), Sao Paulo, to manufacture Risdon valves in that country. Aerosol do Brasil, like Solfrene, also has its own filling installation.

He reported that the Italian aerosol market is currently using about 95% Italian-made aerosol valves, with Precision (made by Bombrini-Parodi) and Risdon leading. Vapsol and SAFCA valves are also used in numbers in Italy, he reported, and other makes of U. S. valves are sometimes imported for special products. Most of these Italian valves are made by hand, but he noted that Bombrini and Solfrene are both in the process of establishing high-speed automatic valve assembly lines.

Dr. Ramella acknowledged that sometimes U. S. valve licensees in Europe fall short of the quality of their U. S. counterparts, because of lapses in quality control necessitated by the fact they must often "farm out" the manufacture of certain of the valve components. Part of the reason for his own company's reputation for quality, he hinted, rests on the fact that Solfrene makes every valve component used, including each of the plastic, metallic, and even rubber parts. "In actuators, for instance, our company has specialized to the point where we can offer special designs for the requirements of the customer. For this reason, and because of the skills of our plastic designers and engineers, many Italian products are equipped with actuators never seen on the American market."

These actuators, he said, have been used principally in the pharmaceutical industry in Italy, where topicals, inhalation, ear and eye, and vaginal products have all been introduced recently in numbers on the Italian market. Dr. Ramella ventured an opinion that Italy's aerosol pharmaceutical development are equal to or ahead of those of any of the other major aerosol countries in Europe.

Perfumes and colognes, on the other hand, haven't yet had a real impact on the Italian market, and Dr. Ramella estimated that not more than 200,000 were sold last year. He suggested that one major problem has been an insistence on the part of many Italian marketers to install captive lines, rather than allow a reputable filler to do their aerosol product development. This has meant that nearly every Italian perfume marketer has had to solve his aerosol



Two views of Solfrene's new aerosol valve and filling plant. Larger building, at right, houses administration and valve manufacture; with filling lines in other buildings.

problems with corrosion, propellant compatibility, etc., almost from the ground up.

"Because of the somewhat lower buying power of the Italian people," Dr. Ramella pointed out, "price becomes a major factor in the success or failure of various products. For instance, price has held back aerosol shave creams, which have not been successful in Italy because of the popularity of shaving sticks that cost about one-tenth of the price of the pressurized can. Because the price has been kept way down (to about 50 cents) pressurized brilliantines *have* been a success."

According to Dr. Ramella, who prior to helping form Solfrene in 1955 was an associate professor in chemistry at the University of Milan, cans and propellants are items of major importance in the development of the Italian industry. Nearly all the domestically produced cans for Italian aerosol products are one-piece aluminum, with any tinplate containers imported from Britain or the United States. Fluorinated hydrocarbon propellants 11 and 12 (called "Algofrenes") are made in Italy, but 114 must be imported from U. S. firms. Butane is also imported (from Germany) and in most formulations is mixed with the flourinated hydrocarbon propellants. Nitrogen is not yet used in Italy for more than experimental purposes, but the dry ice propellant system (developed by Dr. Haase in Germany) has been licensed there and several cologne-type products are already on the Italian market.

Although Dr. Ramella's company is only five years old, in that brief length of time his work staff has increased from 20 to 150 workers. His company presently produces 40,000 valves per day, but expects to increase that figure substantially when automation is installed later this year. He also expects to pay far more attention to his valve production and sales than to his custom filling, and by next year expects to have a valve assembly plant in the Darmstadt-Regensburg area of Germany. Until this plant is established, Solfrene expects to take advantage of the European Common Market by eventually making the metal valve parts in Italy and the nylon and other plastic parts in Germany.

Dr. Ramella estimates the current Italian aerosol production at somewhere in the vicinity of 20 million units, with insecticides and suntanning agents clearly in the lead. He reported that companies in Italy are exporting finished units to Greece, Egypt, and even Spain (which just recently established its own aerosol industry.)★

CSMA Refutes Pilot's Charges of Aerosol Hazard in Aircraft

THE Chemical Specialties Manufacturers Association has moved to counter charges made by a commercial airline pilot that pressurized products constitute a hazard during flight. In a point-by-point examination of the problem, the CSMA statement was aimed directly at a statement made before the January Congressional Hearings on commercial aircraft hazards. The hearings were initiated after several costly aircraft accidents.

The CSMA statement said:

"From a knowledge of the physical characteristics of the components of typical aerosol products it is extremely difficult to visualize any circumstances existing in an aircraft, in flight, which would make an aerosol container any more hazardous than in the home.

"The belief that aerosol products become dangerous in flight is probably based on a misconception that the effective pressure inside the container greatly increases because the external pressure, due to altitude, decreases. While an effective pressure increase does occur under these conditions, the magnitude of the increase is, in fact, insignificant.

"An examination of the factors involved should make this readily apparent. At an altitude of 10,000 feet, the pressure inside the nonpressurized cargo space of the plane is about 10 pounds per square inch absolute (psia), or about two-thirds the normal pressure of the atmosphere at sea level. The latter value is consistently within a fraction of 15 psia. Any container which has been sealed at sea level pressure and is then subjected to the pressure at 10,000 feet altitude will have its effective internal pressure increased by 5 psi. Another way of expressing this is that the force exerted against the inside wall of the container has increased by 5 psi because the force exerted by the pressure of the atmosphere on the outside wall has decreased 5 psi. The absolute pressure inside the container has not actually changed. If the initial pressure inside the container at sea level is 50 psia—this is typical of many aerosol products—its effective pressure at 10,000 feet would again be increased, but still only by 5 psi or 10%.

"Concerning the typical aerosol container whose effective pressure would be increased

(*Continued on Page* 83)

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- excellent solvent power with commonly used aerosol ingredients.
- compatibility with wide variety of propellants.
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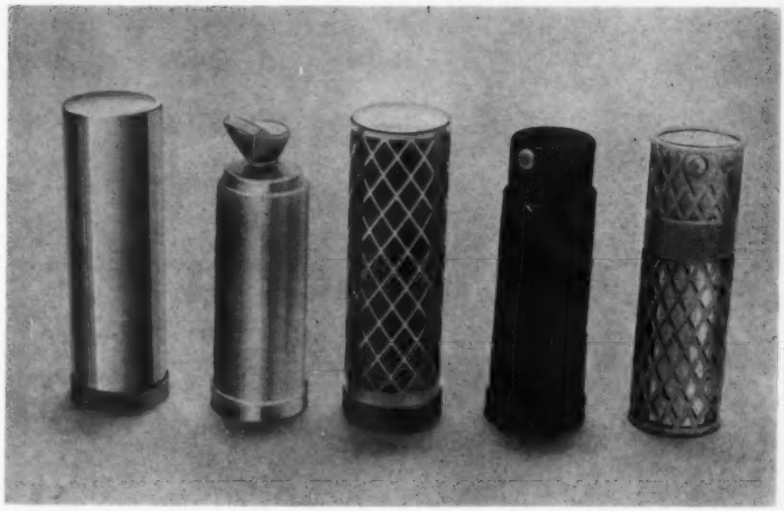

Present range of Richford containers includes brass cover, plastic over black, and plastic over brass.

the Richford Story

inexpensive cologne containers for the large-scale market

WHENEVER a major perfume house introduces its first aerosol product, it is something of an event for the pressurized packaging industry. Similarly, it is impressive indeed that one of the leading suppliers of conventional containers and closures to the perfume industry, Richford Corp. (Oceanside, N. Y.), has entered the aerosol field with such enthusiasm.

Since the introduction of its purse size "Touch-N-Spray" aerosol containers nearly two years ago, Richford has been working hard to develop new variations of the small, inexpensive container that has since become its trade-mark. As an addition to the early all-plastic container, Richford now offers a plastic overcap with a polyethylene mesh covering, still another with a polished brass overcap. As with the more expensive Richford containers, any of these can be "mixed and matched" to give the marketer a good range of lipstick-size aerosol containers. Also, the polyethylene basket-weave protector can be ordered in any of several colors.

Although the standard Richford package is designed specifically, for the VCA family of metering and non-metering valves, Paul R. Roehrich, founder and president of Richford, points out that the design makes possible the incorporation of other makes of perfume valves. He says that his company's matching components are intended primarily to offer the customer unusual design without entailing molding costs for each components. Nor is he confining his activities to the small plastic, glass and metal containers. Possibly by the end of this year, Mr. Roehrich reveals, Richford may have ready a new model uncoated glass bottle, one designed differently from those presently on the market.

Paul R. Roehrich
Richford President

Despite his obvious enthusiasm for the aerosol idea, Mr. Roehrich acknowledges that Richford's aerosol business is still only a small portion of the company's total gross of $2 million per year. In the 20 years since the establishment of the company, its business has grown from $146,000 the first year to its present impressive sales figure. Probably the chief product in this success story has been the "Spill-proof" perfume bottle, which works only by capillary action and markedly reduces the chance of evaporation if the container cover is left off. Also playing a major role has been the company's wide range of closures.

But according to Mr. Roehrich, "design in depth" has been especially important in gaining for the company a large share of a perfume market which once looked to the European supplier for package leadership. Working with designers and fabricators from all over Europe, and the United States, Richford has been able to impart utility, attractiveness, durability, and economy to its line of conventional product components. Vacuum-metallizing for plastic caps of all shapes and sizes, ceramic printing for containers, "jeweling" of caps, and similar imagination in other phases of design and manufacture are relied on to preserve the company's leading position in the field.

Mr. Roehrich's enthusiasm for aerosols is tempered by a firm belief that conventional perfumes packages are here to stay. He is of the opinion that aerosols will add tremendously

(*Continued on Page* 81)

*General Chemical announces a new genetron®

Soon aerosol marketers and contract fillers on the east coast will be "next door" to a large new source of "Genetron" propellants. General Chemical has started construction of new "Genetron" manufacturing facilities at its Elizabeth, N. J. Works. This will be the third "Genetron" plant, supplementing those in Baton Rouge, Louisiana, and Danville, Illinois, and increasing our over-all production capacity by more than one third. This new "Genetron" plant is another example of General's efforts to serve the growing needs of the aerosol industry and will reflect the advanced manufacturing and quality control techniques which have grown from General Chemical's leadership in fluorine chemistry.

For full information about "Genetron" propellants and General's many free technical and marketing services, phone or write the General Chemical office nearest you.

plant in Elizabeth, N. J.

BATON ROUGE, LA. — From this giant fluorochemical center at Baton Rouge, shipments of "Genetron" propellants speed to customers and to General's bulk storage stations for "Genetron" propellants throughout the nation.

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Pressure Filling and Crimping Problems

*By Juljius Gustin**

Research Laboratory
Precision Valve International S.A.
Zurich, Switzerland

FILLED aerosol containers frequently reveal defects which have their origin in incorrect handling of containers or machines during the closing and filling operations. The causes often lie in improper machine adjustments and the operation of machines under conditions for which they were not designed and conditions not recommended by the machine supplier. The following points in this regard are considered in these notes:

I. *Contact Pressure on Affixed Valves*
II. *Velocity of Operation*
III. *Consequences*
IV. *Concentricity*

I. Contact Pressure on Affixed Valves

A certain pressure is necessary for firmly holding the container against the contact surfaces of the clincher as well as the filling head. This pressure is independent of whether the container is moved toward the clincher (or filling head) or whether the machine is moved toward the container, depending on the machine's construction.

Although the contact pressure cannot be absolutely fixed (it varies with different machine construction and operational techniques) there is a certain pressure range which *must* be observed. Trespassing the higher limits of the range can lead to difficulties. As a general rule, the contact pressure for clinching and filling should be in the range of 3 to 6 atmospheres (55 to 88 psi), although some machine builders limit the maximum to 5 atmospheres (74 psi).

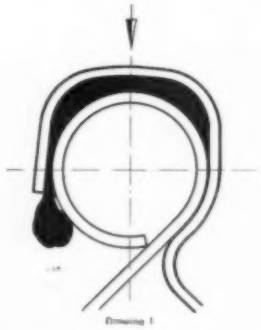
II. Velocity of Operation

The container is moved toward the clincher or filling head with a certain velocity. This must not be too rapid since the contact should be smooth. Since too slow a speed would limit production, a happy medium must be established through observation, study and experience.

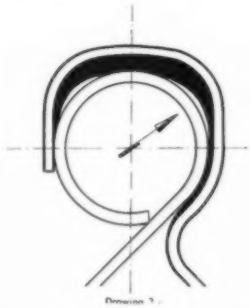
III. Consequences

A. The Clinching Procedure

In order to obtain leak-tight containers in the clinching process, the valve mounting cup must be *uniformly* pressed against the rim of the can before the clinch. However, if this contact pressure is too great, the round contour of the cup skirt and even the can rim may be flattened. In such cases, the gasket-material can be pressed out of the cup (see drawing 1).



This may not give rise to an immediate observable loss since the gasketing material under higher pressure can close even tighter. Disregarding the possible danger of leakage, the can presents a bad image since the protruding gasket as well as the flat cup render it commercially unsuitable. The possibility of leakage in these cases is substantially increased with regard to *flowed-in* gaskets since the regular semi-*circular* contour of the flowed-in gasket loses its symmetrical position relative to the can rim (drawing 2).



In these cases, open space may form, through which the propellant finds its way out of the container. Sometimes losses develop only weeks later. Under these circumstances, the concentrate itself comes into contact with the gasket and thereby produces a negative reaction (swelling or shrinking dependent on chemicals employed). These risks can be eliminated if sound practices are used.

A more important source of difficulty is a deformation of the mounting cup's center pedestal. Also undue

(*Continued on Page* 81)

* This article appeared originally in the Spring, 1960 edition of "Push Button World", aerosol news letter published by Precision Valve International, and is republished by permission of that company.

Spray O'Hickory is a food seasoning said to bring flavor of pure hickory smoke to indoor cooking. Gard Pressure Foods Corp., Northfield, Ill., is marketer of the product, which retails at 79 cents for the three-ounce bottle. Owens-Illinois bottle is topped by a Newman-Green valve.

Sep-A-Wax is a new development of International Products Corp., Trenton, N. J. Said to be a wax solution, product is insoluble in water or oxygenated materials, and is expected to find use for masking, mold release and other applications where adhesion must be prevented. Retailing at $2.25, product uses a Newman-Green valve.

The Primitif fragrance line of May Factor & Co., Hollywood, Calif., has been introduced in a "Deluxe" spray mist container. Refillable unit, in golden tone, will retail at $5.

NEW PRODUCTS AND PACKAGES

Burma Shave regular and menthol products have been marketed in a newly designed package designed to make use of company's famous roadside signs. Clayton valve and cover and Crown can have been retained for new package, which was designed by Thomas Laufer & Associates, Sausalito, Calif.

AEROSOLS in review

A summary of aerosol articles in other publications

Aerosols Gain with Perfume and Cologne Marketers

AEROSOLS are gaining increased acceptance by the marketers of perfumes and colognes, the 1960 "Perfume Index" of the trade magazine, *Beauty Fashion*, revealed last month. Published in the June issue of the magazine, the index lists all the perfumes and colognes by name, gives the marketer, and the form in which the scent is marketed. Well over half of the scents listed appear as "cologne mist," "spray mist," or some other designation indicating a pressurized package.

Each aerosol scent, together with the marketer and package form designation, appears as follows:

Albano Cologne Spray Mist—Matchabelli
Adam's Rib Toilet Water Mist—Lentheric
Ambush Spray Cologne—Dana
Antilope Toilet Water Spray Mist—Weil
Apple Blossom Perfume Mist—Rubinstein
April Violets Spray Mist—Yardley
Apropos Spray Mist—Anjou
Arpege Toilet Water Spray Mist—Lanvin
Aquamarine Spray Mist—Revlon
Audacious Perf-O-Mist—Miahati
Aureate Deluxe Atomist—Dorothy Gray
Autumn Pinx Toilet Water Spray Mist and Purse Spray—Ann Haviland

Balalaika Cologne Mist—LeLong
Bal de Tete Cologne Spray—Maromay
Ballerina Spray Toilet Water—Marie Earle
Bellezza Aerosol Cologne and Perfume Mist—Lenel
Beloved Cologne Spray Mist— Matchabelli
Black Satin Spray Cologne—Angelique
Blue Fern Spray Cologne—Wrisley
Blue Fox Perf-O-Mist—Miahati
Blue Grass Perfume Mist and Flower Mist—Elizabeth Arden
Blue Hyacinth Toilet Water Spray Mist—Ann Haviland
Bond Street Spray Mist—Yardley
Bourrasque Parfume de Toilette Aerosol—Le Galion
Brigand Aerosol Purser—Piguet
Bright Secret Spray Mist Concentrate—Tussy
Brumes Parfum de Toilette Aerosol—Le Galion

Calypso Purse Aerosol—Piguet
Caressant Perfume Mist and Aerosol Cologne—Lenel
Carnation Essence Spray—Mary Chess
Casaque Spray Cologne Concentrate—Jean D'Albret
Cassandra Purse Spray—Weil
Ceil Bleue Cologne Spray—Ceil Chapman
Celestial Spray Mist—Anjou
Chanel No. 5 Spray Cologne, Spray Perfume—Chanel
Chanel No. 22 Purse Size—Chanel
Chantilly Spray Mist—Houbigant
Checkmate Spray Mist—Henry Bendel
Christmas in July Cologne Spray Mist and Cologne Parfumeé Spray—Monico
Command Performance Perfume Mist—Helena Rubinstein

Danger Esscent Mist—Ciro
Danita Spray Cologne—Dana
Dark Brilliance—Cologne Mist and Toilet Water Mist—Lentheric
Debutante de Versailles Perfumizer—Daggett & Ramsdell
Desert Flower Cologne Mist—Shulton
Devastating Spray Mist—Anjou
Devine Spray Mist and Purse Atomizer—D'Orsay
Doux Jasmin Esscent Mist—Ciro
Early Iris Spray Mist Concentrate—Tussy
Ecusson Spray Cologne Concentrate—Jean D'Albret

Electrique Spray Mist—Max Factor
Emeraude Petite Mist—Coty
Emir Spray Cologne—Dana
Enchant Spray Cologne—Wrisley
Espace Spray Mist Cologne—Cheramy
Evening in Paris Perfusion—Bourjois
Evening Star Perfume Spray—Blanchard
Evereve Spray—Rigaud

Fame Perfume Spraygrance and Spraygrance Cologne Concentreé—Corday
Fantastique Spray Mist and Purse Atomizer—D'Orsay
Five O'Clock Perfume Mist—Helena Rubinstein
Flair Spray Mist—Yardley
Flatterie Spray Mist—Houbigant
Fleur Sauvage Concentree Spray—Germaine Monteil
Fourth Dimension Perfume Mist—Helena Rubinstein
Fracas Purse Aerosol—Piguet
Frosty Mist Spray Cologne—Bourjois

Gamin Aerosol Eau de Toilette—Carmel Myers
Gardenia Essence Spray—Mary Chess
Gay Mood Cologne Mist—Frances Denney
Gin Fizz Aerosol Toilet Water—Lubin
Golden Autumn Cologne Spray Mist—Matchabelli

Heven Sent Eau de Parfum Mist—Rubinstein
Hope Cologne Mist—Frances Denney
Hypnotique Spray Mist—Max Factor
Incanto Cologne Spray Mist—Simonetta
Indiscret Cologne Mist—LeLong
Intimate Spray Mist and Metered Purser—Revlon
Intoxication Spray Mist—D'Orsay
Intrigue Perfume Spray—Blanchard

Jaunty Perf-O-Mist—Miahati
Jealousy Perfume Spray—Blanchard
Jet Spraygrance Cologne Concentree and Perfume Spraygrance—Corday
Jolie Madame Spray Mist—Pierre Balmain

L'Aimant Petite Mist—Coty
Lavender Spray Cologne—Dana
Lavender Spray Mist—Yardley
Le Dandy Spray Mist—D'Orsay
Lilac Floral Spray—Tuvache
Lily of the Valley Toilet Water Spray Mist—Ann Haviland
Lily of the Valley Floral Spray—Tuvache
L'Origan Petite Mist—Coty

Ma Griffe Miss-s-s-st-i-fier Cologne—Carven
Memoire Cherie Perfume Mist—Elizabeth Arden
Midnight Spray Mist and Sprayette—Tussy
Mimosa Floral Spray—Tuvache
Miracle Cologne Mist—Lentheric
Moonlight Mist Perfume Mist—Helena Rubinstein
Moroccan Rose Floral Spray—Tuvache
Moustache Cologne Atomizer—Marcel Rochas
Miguet des Bois Mist Aerosol—Coty
My Fancy Perf-O-Mist—Miahat
My Love Perfume Mist and Flower Mist—Elizabeth Arden
My Sin Toilet Water Spray Mist—Lanvin

New Horizons Esscent Mist—Ciro
Nosegay Concentrate Atomist—Dorothy Gray
Nostalgia Concentree Spray—Germain Monteil
Nuit de Longchamp Aerosol Cologne—Lubin

Oh La La Eau Parfum Mist Concentre—Ciro
On Dit Perfume Mist and Flower Mist—Elizabeth Arden
On the Wind Spray Cologne—Bourjois
Ose Cologne Spray—John Robert Powers
Paris Petite Mist—Coty
Pas de Deux Cologne Spray—John Robert Powers
Pink Satin Spray Cologne—Angelique
Plaisir Atomizer—Raphael
Platine Spray Cologne—Dana
Possession Spraygrance Cologne and Perfume Spraygrance—Corday
Potpourri Cologne Spray Mist—Matchabelli
Primitif Spray Mist—Max Factor
Private Affair Perfume Mist—Lenel
Purple Lilac Toilet Water Spray Mist—Ann Haviland

Queen's Guard Spray Cologne—Wrisley
Quelques Fleurs Spray Mist—Houbigant
Rallet #1 Eau de Toilette Spray—Marie Earle
Red Lilac Toilet Water Mist—Lentheric
Red Roses Spray Mist—Yardley
Red Satin Spray Cologne—Angelique
Reflexions Esscent Mist——Ciro
Ricochet Esscent Mist—Ciro
Robe d'un Soir Mis-s-s-st-i-fier Cologne—Carven

Sans Gene Spray Mist—Henri Bendel
Scandal Toilet Water Spray Mist—Lanvin
Seven Winds Mist—DuBarry
Shanghai Toilet Water Mist—Lentheric
Shocking Perfume Flaconette—Schiaparelli
Sibon Spray Cologne—Monico
Side Glance Spray Mist—Anjou
Sirocco Cologne Mist—LeLong
Sonata Eau de Parfum Spray—Countess Maritza
Song of India Cologne Mist—Perkins
Sortilege Parfum de Toilette Aerosol—
Spice'n'Ice Spray Cologne—Bourjois

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Bouquet for Aerosol
S 7738 . . . $5.75 lb.

A modern well rounded
perfume blend with
floral overtones.
Very versatile. . . .

Can be used, for instance in
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Personal Deodorants
Suntan Preparations
Personal Colognes
Space Colognes

Write on your firm's letterhead for a sample.

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Spring Fancy Cologne Spray Mist—Matchabelli
Souvenir D'Un Soir Aerosol Nuage de Parfum—Mary Chess
Stradivari Cologne Spray Mist—Matchabelli
Strategy Essence Spray—Mary Chess
Summer Shower Cologne Spray Mist—Matchabelli
Surrender Esscent Mist—Ciro
Susceptible Perfume Mist and Cologne Spray—John Robert Powers
Tabu Spray Cologne—Dana
Tailspin Cologne Mist—LeLong
Tapestry Essence Spray—Mary Chess
Tarantelle Aerosol Mist—Miahati
10 West Spray Mist—Henri Bendel
Toujours Moi Perfume Spraygrance and Spraygrance Cologne—Corday
Toujours Toi Perfume Spraygrance—Corday
Trapeze Spraygrance Cologne—Corday
Trifling Perfume Mist and Aerosol Cologne—Lenel
Tweed Cologne Mist and Toilet Water Mist—Lentheric
20 Carats Spray Cologne—Dana
Valencia Perfume Mist—Elizabeth Arden
Vent Vert Spray Mist—Pierre Balmain
Vert et Blanc Mis-s-s-st-i-fier Cologne—Carven
Violet Floral Spray—Tuvache
Voltage Concentrate Atomist—Dorothy Gray
White Lilac Essence Spray—Mary Chess
White Lilac Cologne Atomist—Dorothy Gray
White Magnolia Eau de Parfum Mist—Helena Rubinstein
Wind Song Cologne Spray Mist—Matchabelli
Witchery Essence Mist—Primrose House
Wood Violet Toilet Water Spray Mist—Ann Haviland
Youth-Dew Eau de Parfum Aerosol Spray—Estee Lauder
Yram Essence Spray—Mary Chess
Zigane Perfume Spraygrance and Cologne Concentree—Corday
Zizanie Aerosol Eau de Toilette—Carmel Myers

•

AN EXCELLENT article outlining the various approaches to the formulation of space deodorants is featured in the June issue of *American Perfumer & Aromatics*. Written by Dr. A. Haldane Gee, of Foster D. Snell, Inc., the article divides currently available deodorant materials into three categories: "conventional odorants, sophisticated ingredients, and chemical exotics." Of these Dr. Gee writes: "These may be used in various combinations. In the conventional class are the essential oils—florals, spices, wood oils. Some of the sophisticated materials, which may have moderate odors of their own, are believed to reduce malodors without adding appreciably to the general odor. The chemical exotics, of which several are being marketed, are said to remove malodors by one process or another without adding new odor components.

". . . The essential oils are usually employed as masking agents or 'reodorants,' where a pleasant or acceptable odor is used to cover a less pleasant or objectionable odor. Ordinarily the one odor can be detected in the presence of the other, so that an appreciable level of perfume or fragrance may be required for a significant dimunition of the unwanted odor. Obviously there is a limit to the amount of masking agent that may be used in occupied space. The applied agent should not be unduly obtrusive, nor at variance with the personal odor preferences of the occupants of the space, nor should it cause a conflict with the unwanted odors by reason of unsuitability or possible exaggeration of the malodor through some undesirable synergistic effect.

". . . The sophisticated materials, sometimes described as cancelling or modifying agents, are volatile materials, frequently with a light, nondescript odor or one with no special association, pleasant or unpleasant. Many of them are derived from or are similar to natural materials, 6-carbon aliphatic compounds and above — aldehydes, ketones, related compounds. Some are short chain substituted aromatic compounds. Carefully controlled tests show that some of these agents will reduce certain malodors without an accompanying increase in the level of the control agent.

"The cancelling agents may be used in conjunction with frankly masking or reodorant materials, usually as empirically developed mixtures. Their use has a theoretical basis, although there are complications in practice. There are classical demonstrations in the field of odor physiology indicating that pairs of characteristic and usually dissimilar odors may cancel one another if presented to the nose in suitable proportions. Occasionally the one odor may be detected in the presence of the other, but the sensory effect of the right mixture is much less than that of either component of the mixture alone. Unfortunately, there are many practical difficulties in the way of utilizing this phenomenon for space deodorization. The malodors are usually complex. It is difficult to introduce a measured amount of the opposing agent. The over-all level of odor has a bearing on the impression the combination makes on the nose. And there is question in many cases as to whether the cancelling effect is attributable to some loose chemical combination apart from the human observer, or whether the cancellation takes place in the brain."

Dr. Gee then goes into further details on air sanitizing, air freshening, and screening and testing methods in analyzing each of a number of air deodorant materials.

•

SOME complimentary remarks about aerosol spray paints are included in the "Review of Industry for May 1960" in *The London Times*. "Paint spraying processes have never properly caught on for general decorative painting," the article says. "Similarly aerosol painting has, so far, been largely confined to the coating of relatively small objects that are difficult to paint, such as furniture, garden equipment, machinery, toys, cycles, motor cars, etc. Nevertheless, painting by aerosol is free from many of the messy preliminaries usually associated with painting jobs, and when the advantages are more clearly understood, it should become popular."★

•

Pennsalt Opens New Plant

Production and distribution of a diversified line of chemical specialties products has been started by Pennsalt Chemicals Corp. at its new 34,000 square-foot plant in Atlanta, Georgia. Its facilities include packaging and distribution facilities for the full line of "Isotron" aerosol propellants and refrigerants. Chief function of the plant will be manufacture and production of Pennsalt "B-K" cleaners and sanitizers for the food and dairy industries. Plant is located near the Atlanta Airport.

Europe splits into trade blocs

AFTER nearly six months of anxious maneuvering to heal the rift, climaxed by several serious last-minute proposals which would have ameliorated the differences, on July 1 Europe's two major trade alliances, the European Free Trade Association and the European Economic Community (the Common Market) went their separate ways to cut tariffs for their own member nations. On July 1 tariffs between Britain, Sweden, Norway, Denmark, Austria, Switzerland, and Portugal (the European Free Trade Association) were cut by 20%. On the same date the Common Market Nations, France, West Germany, Italy, Belgium, the Netherlands, and Luxembourg, cut their member-nation tariffs by 10%, following an initial 10% cut made Jan. 1, 1959. The Common Market will reduce tariffs by another 10% next Jan. 1 and probably by 20% more by the end of next year. The Free Trade Association may stick to approximately the same schedule.

What all this is expected to mean for the aerosol industry is that American suppliers, who once supplied the bulk of components and filling equipment for the European pressurized packaging industry, will find themselves out of the competitive picture unless they can form subsidiaries in both trade blocs. A number of the valve companies have already done so, and one, Precision Valve International, is now probably the major producer of European-made valves.

On the European continent, the tariff reductions will mean that British can makers will be given "preferred treatment" in the Scandinavian countries, which hitherto have imported goodly numbers of U. S.-made aerosol cans. Similarly, German and Italian propellant makers will have a competitive "edge" for the Benelux countries and France. Swiss filling equipment manufacturers will find an easier market in Britain and Scandinavia, but will be working at a tariff disadvantage in France, Italy, and Germany. And so it goes, with the situation probably getting even *more* acute as new tariff cuts go into effect.

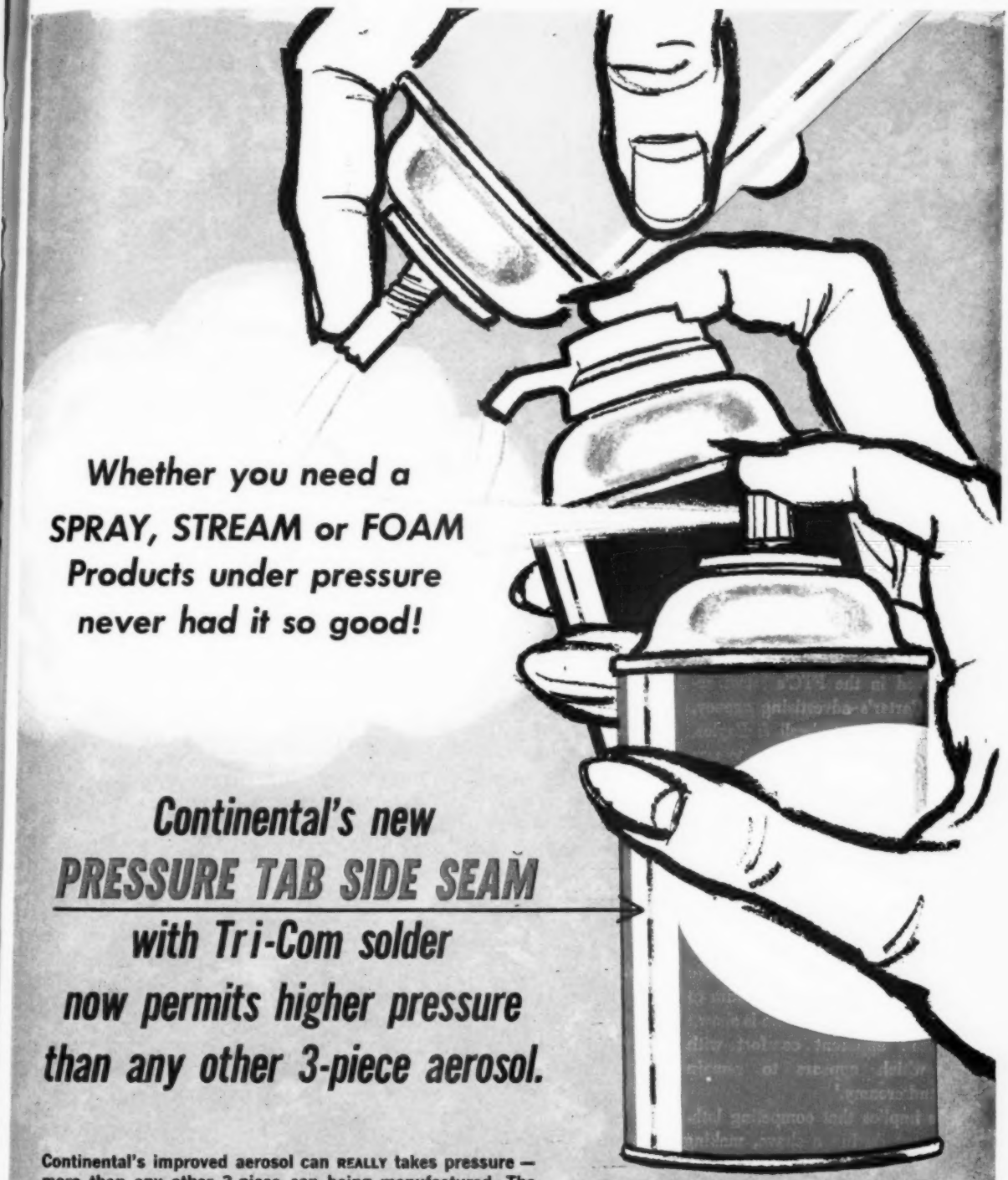
According to *The New York Times*, (June 30), most ordinary citizens in the Common Market seem aware of what is going to happen, and are looking forward to more goods at better prices. "In Brussels, for example, a major department store held a widely advertised sales of imported goods at the prices they will eventually reach when import duties for Common Market items are abolished altogether." The *Times* suggests that "exporting concerns will benefit and are already benefiting from the mere 'psychology' of the Common Market. Exports of each of the six countries to its partners rose twice as fast last year as exports to outsiders."

European observers have pointed out that the European Free Trade Association, known as the "Outer Seven," is not a "natural" trading group, as are most of the members of the "Inner Six" of Common Market. Widely scattered geographically, the younger trade bloc was formed as a defensive alliance against future incursions of the Common Market tariff reductions. Britain is expected to become the hub around which most of the economic trading will revolve.

The closest the two groups have come to an armistice was on June 9, when both agreed to seek a product-by-product answer to the trade disruption their July 1 tariff reductions will bring about. In the first serious negotiation between the groups, it was decided to establish a study group of experts to decide what traditional exports might be hurt by the tariff reductions. The actual solution is expected to be special tariff reductions by members of each group to benefit outsiders.

But this token agreement was disappointing to the majority of the companies involved in export trade, particularly those in the Outer Seven. During recent weeks a whole series of events had given rise to hopes that the final split could be averted. One event was the strong resistance of West German industry to Common Market plans to accelerate its tariff reduction schedule. Another was a speech by General de Gaulle (at the time misconstrued) in which he seemed purposefully vague about French policy toward the Common Market. But probably the event that raised the highest hope was a misunderstood "offer" by Britain to join the Coal and Steel Community and the European Atomic Energy Community (Euratom), both institutions of the Common Market nations. This was interpreted incorrectly as signalling a major change in the policy

(*Continued on Page* 84)



Whether you need a
SPRAY, STREAM or FOAM
Products under pressure
never had it so good!

Continental's new
PRESSURE TAB SIDE SEAM
with Tri-Com solder
now permits higher pressure
than any other 3-piece aerosol.

Continental's improved aerosol can REALLY takes pressure — more than any other 3-piece can being manufactured. The can's unique pressure tab side seam, together with Continental's improved solder method, form the greatest bond stability available.

That's not all—the new can provides greater protection over longer periods... holds higher pressures at elevated storage temperatures... increases the range of propellent mixtures useable in containers... paves the way for expansion in the entire aerosol industry.

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news of pressurized packaging

FTC Cites Carter Products for Shave Cream Advertisement

THE second major marketer of aerosol shave creams within six months has been cited by the Federal Trade Commission for deceptive television commercials. Carter Products, Inc., New York, marketer of "Rise" shaving cream, late in June was charged with use of a television commercial that unfairly disparages the products of its competitors. In January Colgate-Palmolive Co. was cited by the FTC for using a "mock-up" of plexiglass and sand for a shaving demonstration purporting to show actual sandpaper being shaved.

Also cited in the FTC's latest action are Carter's advertising agency, Sullivan, Stauffer, Colwell & Bayles, Inc., and S. Heagan Bayles, who was in charge of the "Rise" account and is now chairman and chief executive officer of the agency. In making public its charge, the FTC outlined its objections to the "Rise" commercial:

"A typical TV commercial cited first shows the actor shaving with what purports to be a competing shaving lather, which appears to have dried out on his face, causing him to wince in discomfort. Next he is shown shaving in apparent comfort with 'Rise,' which appears to remain 'moist and creamy.'

"This implies that competing lathers dry out during a shave, making shaving more difficult and uncomfortable while 'Rise' stays 'moist and creamy' throughout, resulting in an easier and more comfortable shave. In reality, the supposed competing lather is a formulation specially prepared for the demonstration, and is not a product used for shaving purposes. Consequently, the demonstration is not a valid comparison of the respective qualities of 'Rise' and competing products and tends to disparage the latter."

This is Carter's second citation from the FTC in less than a year. Last November Carter was ordered to drop the name "Carter's Little Liver Pills" for one of its products. Despite an appeal to the Supreme Court (the court refused to review the order) Carter lost the case and had to change the name of the product.

New Filler in Houston

Houston Aerosol Co., a new pressurized packaging company in that area, recently began operations at a new plant at 1501 Gazin Street in Houston, Tex. R. A. Hale is president of the company, which has production facilities to turn out 3600 aerosol cans per hour. Early production includes insecticides, fire extinguishers, and lubricants. According to the *Houston Chronicle*, the company management expects to gross about $250,000 during its first year.

•

Old Empire in New Merger

Old Empire, Inc., Newark, N. J. aerosol and conventional product filler, last month announced a merger "for operating purposes only" with Welton Laboratories, Inc., Newark marketer of packaged drugs and pharmaceuticals. Though bringing about no changes in the basic trade and operating policies of the two companies, the merger is expected to bring about an immediate expansion of Welton's sales force and merchandising activities. Old Empire's extensive research and production facilities will be made available for the development of new Welton products in the ethical and proprietary fields. Also, Welton's present production facilities will be combined with those of Old Empire.

Announcement of the merger followed a 4½-month period of study, during which the two firms worked together under a financial affiliation agreement. John A. deElorza, president of Old Empire, and John D. Horn, a director of that firm, will be

John deElorza, president of Old Empire

on the Welton board of directors with Claude S. Welton, president of that company, and Francis X. Stanley, vice-president.

•

Donald Roth Joins Mennen

Donald Roth has joined The Mennen Co. of Morristown, N. J., as chemist in the company's research and development laboratories. Mr. Roth previously was with International Flavors and Fragrances at Union Beach, N. J.

Mr. Roth was graduated in 1958 from Rutgers University, with a BA in Chemistry. Prior to graduation, he worked in various chemical companies as technician.

•

D & O Names Hartley VP

Dodge & Olcott, Inc., New York, has announced the appointment of Kenneth W. Hartley as vice-president and sales manager of the 161-year-old firm. He has been a member of the D & O sales staff since 1949 and in 1951 assumed management of the Chicago branch office.

SCENTS
POLAK'S RUTAL WORKS INC, MIDDLETOWN, N.Y.
AMERSFOORT, HOLLAND · PARIS, FRANCE · BREMEN, GERMANY · BRUSSELS, BELGIUM · SOFLOR LTD. · PERIVALE, ENGLAND

Wherever She Goes...

she will treasure

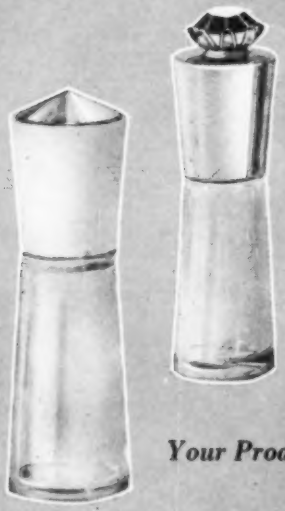
these handy, refillable containers

RICHFORD'S OUTSTANDING PURSE-SIZE FLACONS

Available in an unlimited selection of bottle and cap combinations, Richford has designed these beautiful flacons to meet "her" needs.

Princess

Featuring the new snap-off gold metal case, for easy bottle replacement. Available with futura or assorted caps in exceptional finishes.



1 and 2 dram sizes spillproof or standard openings with futura or assorted caps in a variety of finishes.

Your Product Deserves

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Write now for samples and prices.

Executive Offices and Plant
3618 Oceanside Rd., Oceanside, N. Y.
Showrooms
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Sales offices in all major cities throughout the world

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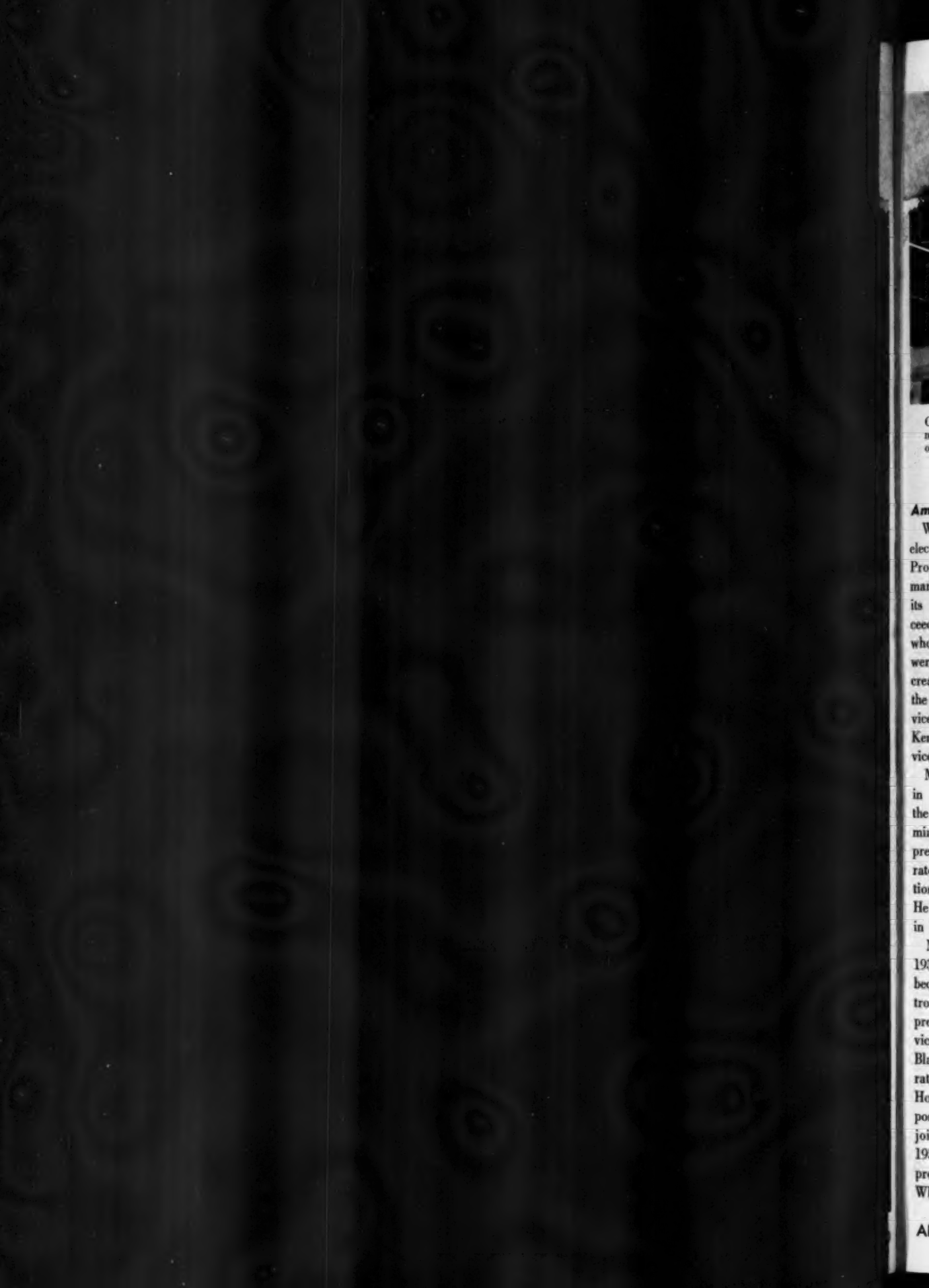
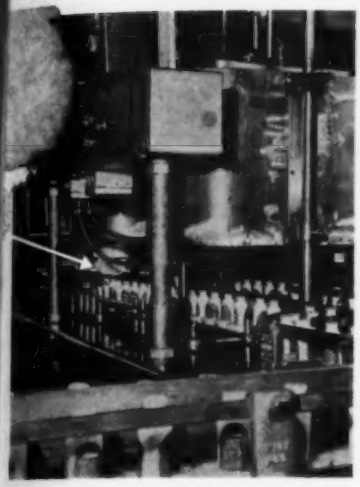


Automatic Aerosol Filling Line Installed by G. Barr



Close-up of filling head of the automatic line. Accuracy of plus or minus one gram is attained.

COMPLETE automatic packaging of cologne and perfume in glass aerosol containers has become possible with the recently completed automatic assembly line installed at G. Barr and Co., Chicago custom filler.

The installation of the line, which operates at 120 units per minute, is said to assure cosmetic marketers of more meticulous production runs with increased economy. Although intended for high speed production, the assembly line can be controlled for minimum quantity runs. While geared to handle specialized problems such as precise positioning for filling containers with openings as small as 20 millimeters, the line is so designed to facilitate filling of any aerosol product into glass bottles. Before the introduction of automation, most production of bottle runs was accomplished on a hand or semi-automatic system.

A typical filling operation begins with bulk pre-mixing of product and propellant in stainless steel pressure tanks to insure complete uniformity. Each bottle is automatically cleaned and coded with a control number. Filling is said to be extremely accurate, with filling weights as precise as plus or minus one gram. Specially designed automatic bottle centering devices permit precision alignment of bottle and filling spouts, even when bottle openings are quite small. Every bottle is washed. Magnetic conveyors transport bottles through the leak test bath and air drying tunnels, preparatory to final packaging in a variety of boxes and other display materials.

American Home Elects LaPorte

William F. Laporte last month was elected president of American Home Products Corp., New York, a major marketer of aerosol products through its Boyle-Midway Division. He succeeds the late Walter F. Silbersack, who died on June 7. Also elected were Herbert E. Carnes to the newly-created position of vice-chairman of the board, H. W. Blades to executive vice-president and director, and Kenneth A. Bonham to executive vice-president.

Mr. Laporte joined the company in 1938 following graduation from the Harvard School of Business Administration. In 1948 he was elected president of AHP's Whitehall Laboratories and in 1957 became corporation vice-president and a director. He became executive vice-president in May of this year.

Mr. Carnes joined the company in 1936 as a tax consultant, subsequently becoming assistant secretary, comptroller, treasurer, director, a vice-president in 1950, and executive vice-president a year later. Mr. Blades is president of Wyeth Laboratories, a division of American Home Products, and has held that position since 1956. Mr. Bonham joined the company in 1951 and in 1957 was named executive vice-president and general manager of Whitehall Laboratories, and became president that same year. He was made a vice-president of American Home Products in May of this year.

•

Gen. Chem. Names Fedoruk

The appointment of John C. Fedoruk as technical director has been announced by Allied Chemical's General Chemical Division, New York. He succeeds Dr. Howard H. Huremence, who was recently named assistant director of research and development for the corporation.

With the division 19 years, Mr. Fedoruk was assistant technical director for the past six. Earlier he served as manager of General Chemical's development laboratory at Baton Rouge, La., and as research chemist at its plant in North Claymont, Del.

Mr Fedoruk is a graduate of Yale University where he received a B. S. degree in chemical engineering in 1939. He is headquartered at the General Chemical Research Laboratory in Morristown, N.J. which is currently being expanded to double existing facilities, making room for almost 500 scientists and their supporting staffs.

•

Danilek Visits Europe

Joseph Danilek, president of Mary Chess, Inc., New York, returned last month from a trip to Europe.

Chemway Buys Two Companies

Chemway, Corp., Wayne, N. J. marketer of cosmetics and pharmaceuticals, has announced the acquisition of two companies manufacturing specialty items used in the opthalmology and optometry fields. Chemway purchased outright both Iso-Sol Co. and its subsidiary, Contractisol, Inc., Lindenhurst, N. Y. Chemway reported that it plans to integrate Iso-Sol into the operations of its ethical drug subsidiary, Crookes-Barnes Laboratories, but will operate Contractisol as an operating affiliate of Crookes-Barnes. Products of both companies, formerly sold only in the Middle Atlantic States, will be sold nationally through Crookes-Barnes.

•

Velsicol Names Overton

Curtis N. Overton, former technical sales representative for California Spray-Chemical Corp., has been appointed sales representative for the Agricultural Chemicals Division of Velsicol Chemical Corp., Chicago. An agronomist, he is an addition to the company's sales and technical service in the Midwest area.

Let's look at your cosmetic aerosol fragrance problem from every angle!

In custom-creating a fragrance for your cosmetic aerosol, Givaudan examines your problem from *every* angle—perfume efficacy and consumer acceptability... types of propellents... pressure... solubility... compatibility... container material... cost and other factors.

Our staff is equipped with the skill, knowledge and specialized facilities to study such problems scientifically. Thus we can supply you with a fragrance that is not only technically correct from every viewpoint but uniquely and specifically *yours*. May we work for you—with you—to give your cosmetic aerosols exactly the right fragrance appeal?

GIVAUDAN-DELAWANNA, INC
321 West 44th Street, New York 36, N. Y

IFF Elects Four VP's

International Favors & Fragrances, Inc., New York, last month announced the election of four vice-

Dedrick

Webster

Shiftan

Van Mameren

presidents. The new officers are Alec J. Dedrick, Ernest Shiftan, and Fred W. Webster, all former vice-presidents of the company's van Amerin-gen-Haebler Division, and Henri G. van Mameren, recently appointed general manager of the Flavor Division at Elizabeth, N. J. According to Charles P. Walker, company president, the appointments are aimed at further consolidating corporate activities in flavors, creative perfumery, and sales.

•

Penick Buys Canadian Firm

Majority interest in Fine Chemicals of Canada, Ltd., Toronto manufacturer of fine chemicals, botanical drugs, and animal derivatives, has been purchased by S. B. Penick & Co., New York. The Canadian firm also does custom ampouling of medicinal products for pharmaceutical marketers.

Edwin G. Dentay, founder, will continue as head of the firm, and, according to Penick, no executive changes are anticipated.

•

Malmstrom Buys Namesake

N. I. Malmstrom & Co., Brooklyn, N. Y., manufacturer of lanolin and lanolin derivaties, many of which are used in cosmetic aerosols, last month was purchased by The Malmstrom Chemical Corp., Newark, N. J., a major lanolin refiner. Terms of the transaction were not disclosed, but the announcement said the Newark firm had acquired all the assets of N. I. Malmstrom.

•

Colgate Appoints Ouelette

Philip Ouelette has been appointed to the scientific staff of the Colgate Pharmaceutical Laboratories Division of the Colgate-Palmolive Co., New Yodk. He will serve as a product development chemist at the Pharmaceutical Laboratories in New Brunswick, N. J.

Prior to joining Colgate-Palmolive, Mr. Ouelette was with the Chemical Division of Merck & Co. for five years. A second generation pharmacist, he received his B. S. degree in pharmacy from the Massachusetts College of Pharmacy in 1950 and his M. S. degree from the University of Maryland's College of Pharmacy in 1955. He is a member of the American Pharmaceutical Association and the New Jersey Pharmaceutical Association, and a registered pharmacist in Maine, Maryland and New Jersey.

•

Dr. Zick Joins Velsicol

Velsicol Chemical Corp., Chicago, last month announced the appointment of Dr. Warren H. Zick as an agronomist-herbicide specialist in its research and development department. He was formerly with the U.S. Borax Research Corp.

•

Canada Sets Tariff Hearings

First of the Canadian Tariff Board's public hearings on chemicals will be held Sept. 12 in Ottawa. The first hearing will consider the halogens (fluorine)—aerosol propellants are in this category—and nitrogen. Other hearings will be held on alcohols, surfactants, pesticide preparations, and other chemical groups. Proposals concerning wording of tariff items and rates of duty should be filed with the Tariff Board, 70-74 Elgin Street, Ottawa, at least 60 days before the hearing to which they relate.

Siegelbaum to Hysan Products

Hysan Products Co., Chicago, marketer and filler of aerosol household products, has appointed Moe

Moe Sigelbaum

Sigelbaum to its sales staff. He will cover the Southeastern States, including Florida, Georgia, Alabama, North Carolina, South Carolina, and East Tennessee. His chief function will be sales development of Hysan's own product line of aerosol and conventional products.

•

Gen. Chem. Renews Grant

Allied Chemical's General Chemical Division has renewed its grant in aid of $3,000 to the College of Pharmacy, St. John's University, Jamaica, New York for aerosol research for the year beginning September 1, 1960. Initiated last year under the direction of Dr. John J. Sciarra, associate professor of pharmaceutical chemistry, the program is concerned with the solubility and stability of pharmaceuticals in aerosols.

The College of Pharmacy at St. John's University has one of the newest and largest specialized aerosol research laboratories in the country and is one of several colleges and universities now devoting part or all of their development programs solely to aerosol research.

General Chemical Division, producer of "Genetron" aerosol propellants, has renewed the grant in aid as an extension of its own aerosol research and technical service programs which embrace all types of aerosol product development. The division's aerosol technical service laboratory is located at Edgewater, New Jersey and its research program is conducted at the General Chemical Research Laboratory, Morristown, N. J.

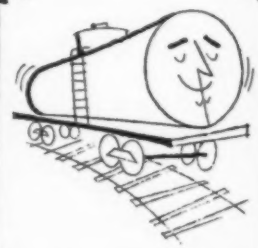
Are you taking advantage of all these Du Pont services?

ON-THE-SPOT TECHNICAL SERVICE

Du Pont know-how and experience come to you wherever you are, whenever you need them . . . through trained technical representatives. These men are aerosol specialists and will work with you on production problems . . . offer you the facilities of the "Freon" Sales-Service Laboratory.

MARKETING SERVICE

Du Pont regularly conducts surveys, clinics and seminars to bring you up-to-the-minute market information on aerosols. No other manufacturer of propellents offers such comprehensive studies. These facts and figures can help you pinpoint new markets for increased sales and profits.



PROMPT SERVICE ON "FREON"

There are three Du Pont plants manufacturing "Freon" in the U.S., one in Canada and a network of warehouses to assure you of virtually local delivery . . . fast and efficient. "Freon" propellents are recognized throughout the aerosol industry for their unvarying high quality and top performance.

PRODUCT DEVELOPMENT SERVICE

Working on a new aerosol product? Du Pont may be able to help you with information on new or improved aerosol techniques worked out by its product development research team. These men can save you time and expense in experimental work by assisting you with their knowledge of formulations and packaging.

Basic research in aerosol is still another Du Pont activity that can help you. It's conducted on a continuing basis and new developments are promptly passed on to you to assist in market expansion.

FREON®
PROPELLENTS

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

In addition, Du Pont national advertising on "Freon" helps establish a quality product in the minds of your customers . . . contributes to a better sales "climate" for you. E. I. du Pont de Nemours & Co. (Inc), "Freon"* Products Division 328, Wilmington 98, Delaware.

**"Freon" is Du Pont's registered trademark for its fluorocarbon propellents.*

ConCan Appoints Hayford

Warren J. Hayford, formerly a Baltimore metal can sales representative, has been promoted to district sales manager in Philadelphia for Continental Can Co., New York.

W. Miles Ryan, who has been the company's Philadelphia district sales manager for many years, becomes a special sales representative in that city.

•

Mexican Propellant Market

Plans to build plants for the production of hydrofluoric acid, carbon tetrachloride, and fluorinated hydrocarbons in Monterrey, Mexico, have been formulated by Celulosa y Derivados, S.A., Monterrey, N.L., Mexico, according to a statement made last month by Miguel G. Arce, president of Celulosa. Sr. Arce also announced that the General Chemical Division of Allied Chemical Corp. would provide technical information for the project.

He said that the plant, which is expected to be completed early in 1951, will have sufficient capacity not only to supply current and estimated future needs of Mexico, but also to supply these products under Mexican label throughout Latin America. None of these chemicals is currently produced in Mexico, except for hydrofluoric acid which is made in limited quantities. He emphasized that all of the raw materials, utilities, and labor for the new plants will be supplied from the Monterrey area or from other Mexican sources.

Allied's General Chemical Division is one of the primary U.S. producers of hydrofluoric acid and fluorinated hydrocarbons, which it markets under the trade name "Genetron."

•

Seven MD's to Study FDA

A review of the policies, procedures, and decisions of the Antibiotics and New Drug Divisions of the Food and Drug Administration has been ordered by Secretary of Health, Education, and Welfare Secretary Arthur S. Flemming in the wake of the firing of Dr. Henry Welch recently. A seven-man committee of prominent physicians will conduct the review under the direction of Dr. C. Phillip Miller, professor of medicine at the University of Chicago.

•

Powers Elects Curtin VP

John E. Curtin, Jr., has been named vice-president in charge of product development and planned expansion for John Robert Powers, Inc., New York cosmetic marketer. He had been with Powers a year, and prior to that was manager of product planning and development at General Electric.

•

Revlon Names Advertising Chief

Revlon, Inc., New York, last month appointed Theodore G. Bergmann vice-president of advertising. He will be responsible for all the company's advertising in television, radio, newspapers, and magazines. He replaces Evan William Mandel, who will devote his full time to duties as assistant to the president.

Mr. Bergmann was president of Parkson Advertising Agency, Inc., becoming chief executive officer in 1957. Previously, he had been a vice-president of McCann-Erickson, Inc., and managing director of the DuMont Television Network. At Parkson, he was responsible for the advertising activities of the J. B. Williams Co., manufacturer of toiletries and proprietary medicines.

•

Schwartz Joins Bourjois

Joseph Schwartz, former purchasing director of Helene Pessl, has joined Bourjois, Inc., New York, as director of purchasing. Prior to his association with Helene Pessl he was with McKesson and Robbins and Revlon.

•

Austrian Firm Seeks Agent

Brueder Unterweger, Thal-Assling (East Tyrol), Austria, has announced that it is interested in obtaining the services of a distributor for its aerosol product in that country. The product is called "Tyrolean Forest Air."

Fritzsche Brothers Names Two

Fritzsche Brothers, Inc., New York manufacturer of perfuming materials and essential oils, last month announced two major appointments for its Perfume Division. Julius P. Bauer, newly-elected vice-president, has been made director of the division. Robert E. Brown, who will work directly under Mr. Bauer, has been made director of the Fritzsche perfume laboratories. Both have had extensive experience in the Division. Other members of the Perfume Division will function as previously, with Ernest Lawson handling customer problems and George H. Ammersbach acting as technical consultant to customers.

R. E. Brown J. P. Bauer

•

Package Design Workshop

Pratt Institute Evening Art School, 221 Ryerson Street, Brooklyn, N.Y., last month announced that its third annual Package Design Workshop will begin on Tuesday Evening, Sept. 20, and continue for 15 consecutive Tuesday evenings. The workshop is open to both beginning and advanced artists who wish to broaden their knowledge of the field of package design. It combines practical lectures and demonstrations with the actual preparation of a package design by each student. Robert I. Goldberg, packaging designer, consultant, and educator, is director of the workshop.

•

Evyan Perfumes Names Agency

Evyan Perfumes, Inc., New York, have announced the appointment of Wesley Associates, Inc., New York, as its advertising agency for the placement of national advertising. The company markets "White Shoulders," "Great Lady," and other perfumes and colognes.

OUT OF THIS WORLD *FISHING!*

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★ Two guests only per boat; ★ The best in meals and accommodations; ★ Management with years of experience.

Arctic Lodges' twin motored DC3 or C46 charter planes will fly your customers and executives directly to the lodge airstrip. Only one stop for customs and gas.

Top sportsmen, writers and experienced fishermen acknowledge Reindeer Lake to be the finest fishing spot in Canada.

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Phone or write for complete information. Our 16 mm sound and color film, 25 minutes in length, is available at no charge for group showings.

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Phone: FEderal 8-1583

Fair Trade Hassle Continues, FTC Asks Drug Firm Exemption

THE Fair Trade merry-go-round, kept going all summer by efforts by both sides to kill or reinforce state or federal measures, received a new push last month by a whole series of widely scattered events. "Fair trade" is a concept by which retailers would have protection against discount houses by means of a manufacturer (or marketer)—established price which could not be undersold except by permission of that marketer. This year a Federal measure has been permanently stalled in the House Rules Committee and a number of state laws have been overturned by unconstitutional rulings from the state's Supreme Court.

Last month it was revealed that the staff of the Federal Trade Commission had urged that five antibiotics companies be required to abandon fair trade contracts on antibiotic products, and "discontinue suggesting, urging, or influencing prices or other conditions of sale on the part of any wholesaler, retailer (or) dealer." The five companies, Bristol-Myers, Lederle, Pfizer, Squibb, and Upjohn, are expected to be cited by an FTC action charging "conspiracy" among the companies. If the FTC action succeeds, the fair trade ban would extend for five years.

At the end of June Judge Ray C. Fountain, of the Polk County (Iowa) District Court, ruled that Iowa's fair trade law is unconstitutional in that it unlawfully delegates legislative power to manufacturers by allowing them to establish minimum prices binding even those who do not sign contracts. The case was brought by Bulova Watch Co. against the Robinson Wholesale Co. of Des Moines and Davenport. Bulova is expected to appeal the case to the state supreme court.

In Ohio, within a few days after one district court held the state's fair trade law to be unconstitutional (July *Aerosol Age*), another, the Franklin County Court (Columbus), seeing no fault in the statute, issued injunctions against two alleged violators. Johnson & Johnson was granted an injunction against Columbus Vitamin & Cosmetic Distributors, and at the same time Shulton won a case against a retailer called Fame. The previously reported case occurred in the Hamilton County Court (Cincinnati) in a case lost by Helena Rubinstein to Hudson's Vitamins & Cosmetics Distributors.

Ellis Speaks At Pkg. Forum

John G. Ellis (right), president of Sprayon Products, Inc. of 2075 East 65th St., Cleveland, O., discusses recent developments in aerosol packaging with Melvin Mandell, industrial editor of *Dun's Review and Modern Industry*, at a round table forum on Packaging at New York's University Club in late June.

Mr. Ellis, founder of one of the first aerosol loading companies and pioneer of many new filling techniques, told the gathering of top packaging executives that aerosol packaging has made possible the introduction of many new products such as women's hair sprays, for which there formerly was no practical means of application. He also stated that one of the industry's foremost areas of expansion would be in the cosmetic and pharmaceutical field, where the aerosol package offers unparalleled advantages such as women's hair sprays, for which there formerly was no practical means of application. He also stated that one of the industry's foremost areas of expansion would be in the cosmetic and pharmaceutical field, where the aerosol package offers such important advantages as the dispensing of a metered amount of product, elimination of spillage and evaporation, and ease of application.

•

New Filler in Northwest

A new company to fill and market aerosol products in the Northwest has been founded at Portland, Oregon. The new company is Miller Products Co., at 7737 N.E. Killingsworth, Portland 1, Oregon.

•

Pyrethrum Production Is Up

Production of the insecticide, pyrethrum, in Kenya during the 1959-1960 (July to June) year is expected to reach 14.3 million pounds, compared with 9.2 million for the previous period in 1958-1959. Pyrethrum is a leading aerosol insecticide ingredient.

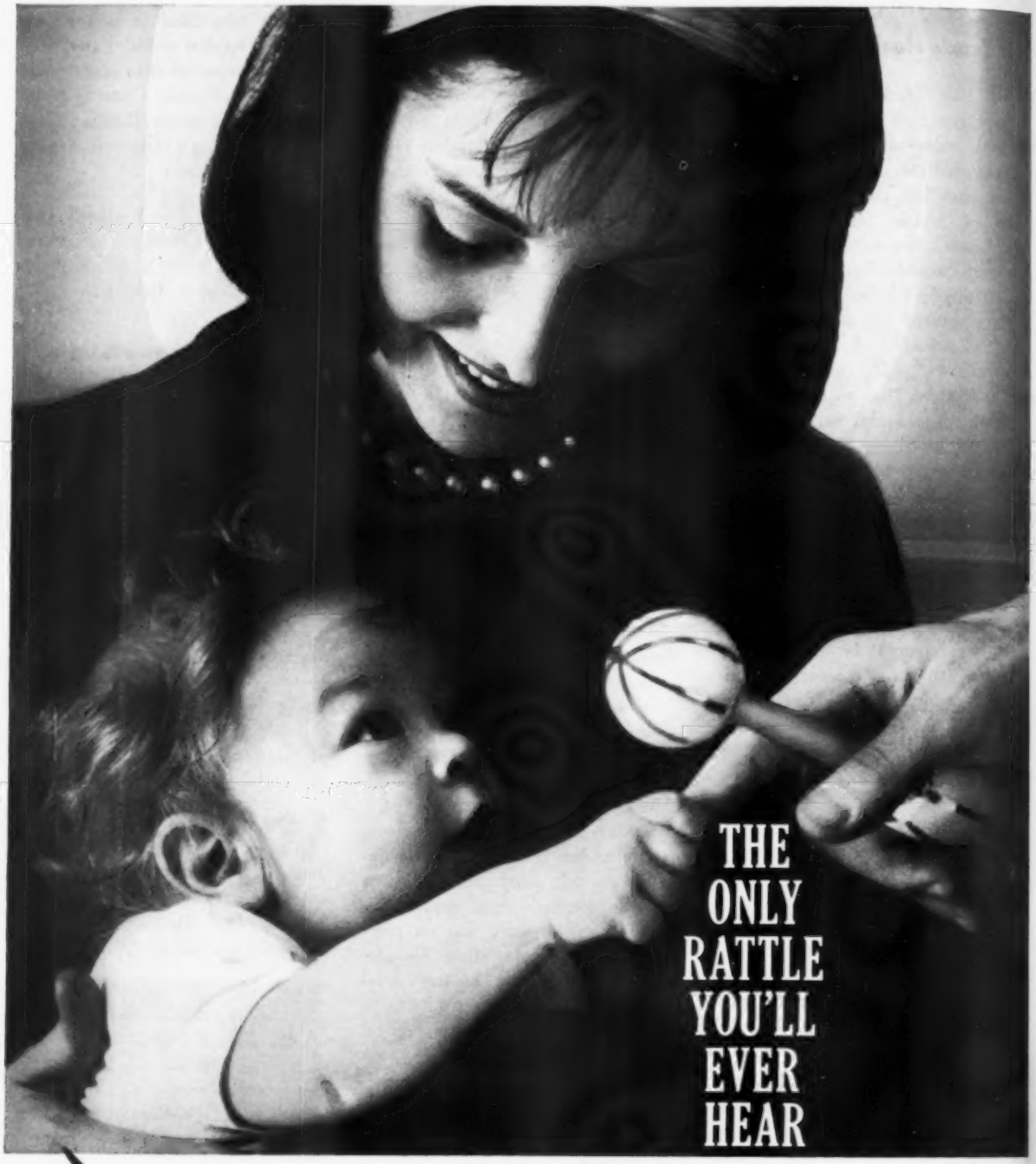
For the 1960-1961 period the Pyrethrum Board of Kenya is licensing production of about 23.1 million pounds, which will be the highest quantity ever licensed. Previous high was 16.6 million pounds produced in 1945 under the wartime guarantee of the British Government.

•

Risdon Holds Plant 'Open House'

Risdon Manufacturing Co., Naugatuck, Conn. manufacturer of aerosol valves and containers, recently held an "Open House" to give stockholders a glimpse of company opera-

tions. One feature of the exhibit was an aerosol valve display (photo above) which showed a valve assembly machine and photographs and sketches of how the valve is made. Young women dressed in costumes of 1910 (the year of Risdon's founding) explained the highlights of each exhibit.



Smooth as a summer breeze, but about 600 mph faster. That's the KLM Royal 8 jet, now flying non-stop New York to Europe. And the Dutch see to it that every fleeting moment is extra special, even for the tiniest passengers. It's part of the personally efficient service you always get on KLM. Reserve now, First or Economy Class. See your travel agent (professionals plan better trips). Or call the nearest KLM office. KLM Royal Dutch Airlines, 609 Fifth Avenue, New York 17, N. Y.

THE WORLD'S FIRST AIRLINE

THE WORLD OVER
KLM
ROYAL DUTCH AIRLINES

DC-8 JET

equipment processes bulletins

Fairfield Offers Aerosol Chart

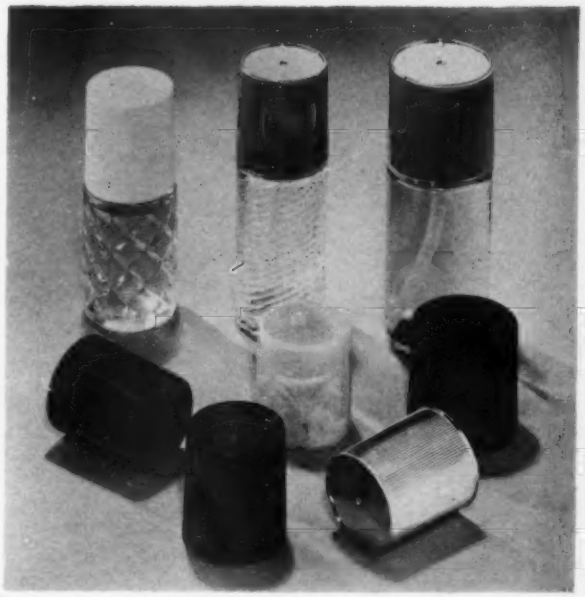
A new chart which permits rapid calculation of cost per unit and quantity of Fairfield Special Aerosol Concentrate required in pressurized insecticide formulations has been issued by Fairfield Chemicals Division of Food Machinery & Chemical Corp., 441 Lexington Ave., New York. The chart supplies a cross-reference which enables the formulator to figure weight per container and propellant-concentrate ratios to get per unit cost and the amount of insecticide base required per 1000 units. Fairfield makes pyrethrin-piperonyl butoxide combinations under the name Pyrenone.

•

Florasynth Issues New Catalog

A new and revised flavor catalog has been issued by Florasynth Laboratories, Inc., 900 Van Nest Ave., New York 62. The 32-page booklet contains a list of flavors, flavoring materials, essentials oils, aromatics, and food colors. Included are both natural and imitation flavors, liquid and entrapped dry powder flavors, and many other flavor specialties. Among other items of interest to the aerosol food marketer, is a section on medicinal, pharmaceutical, and vitamin flavors.

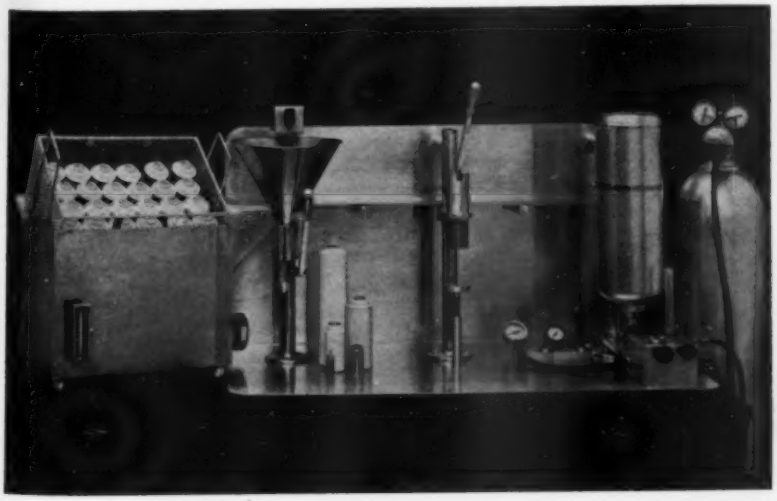
Pharma Plastics Markets Wider Range of Aerosol Caps



Pharma Plastics, Inc., 205 S. Smallwood Street, Baltimore 23, Md., is currently producing an increased line of decorative plastic caps to fit 1½, 2, and 3-ounce Foster-Forbes uncoated glass aerosol bottles. In addition to the solid colors, variations, and gold metallized caps shown in the photo, engraved tops are also available to produce customized versions of the caps. Internal design is said to fit any make of 20mm aerosol valve.

New Florida Company Unveils Aerosol Equipment Line

PRESSURE PAK, INC., P.O. Box 2587, W. Palm Beach, Fla., newly formed aerosol equipment manufacturer, has just unveiled its new line of laboratory and small-run aerosol filling equipment. Claimed to be "possibly the lowest priced complete aerosol packaging unit on the market today," the basic unit consists of a filler, crimper, and gasser together with a pressure tester and nitrogen/fluorocarbon filling mechanism. Also available is a thermostatically controlled leak-test tank equipped with a ground plug and socket operating from an 110-volt outlet. Since each of the operations must be done by hand, the unit is designed to handle small-run or laboratory-scale production runs.



According to Herbert Z. Sokol, president and technical director of the company, the unit will handle cans and bottles ranging in size from one to 80 ounces. Called the "Model 1000-M," it is made of stainless steel and aluminum and requires only eight square feet of shelf space.

OCTOBER

IS THE

BUYER'S GUIDE

ISSUE OF AEROSOL AGE

- The fourth annual Aerosol Buyer's Guide will be the most complete listing of aerosol suppliers ever compiled — and will be used by industry buyers until October of 1961.

- Make sure your company's products or services are listed in the new Buyer's Guide by writing to our editor today. *All product listings are free.* Advertisers in the Buyer's Guide will receive a bold face listing together with a cross reference to the advertising page number.

- **Here are some of the categories that will be listed in the Buyer's Guide:**

Caps
Containers
Valves
Dip Tubes
Propellants
Equipment
Labels
Insecticides
Aromatics & Perfumes
Pharmaceuticals
Emulsifiers
Deodorants
Lanolin
Custom Fillers (for the trade)
Aerosol Products (filled containers for the trade)
Consultants
Miscellaneous

- Make sure that your company takes the fullest advantage of this year's Buyer's Guide by scheduling a dominant advertisement in the same issue to secure the bold face listing in the directory together with the cross reference to your advertising page. Regular advertising rates!

Make your advertising space reservation early!

AEROSOL AGE

CALDWELL CApital 6-5520 NEW JERSEY

Emson Unveils Steel Container

A new 13½ cc. stainless steel inner container has been developed by Emson Research, Inc., Bridgeport,

Conn. to offer marketers of perfumes, cosmetics, and other aerosol products larger purse-size units with little increase in package costs. The larger unit is being introduced as a complete package, with metered valve assembly, and is said to offer 100 to 125 more applications than the smaller 10 cc. size. The outer unit is designed according to customer requirements and is made of anodized aluminum in a variety of finishes. Sample units and additional price information are available from the company at 118 Burr Court, Bridgeport.

•

Flexographic Label Maker

A new flexographic label making unit has been announced by Sohn Manufacturing, Inc., Elkhart Lake, Wis. The unit will print and die-cut in one operation on pressure-sensitive paper with backing, print and score-cut in one operation on pressure-sensitive paper with backing, heat seal, water soluble gum, foil, or plain paper. It will print and cut a label from 1″ x 1″ to 5″ x 6″. The unit measures 14″ w. x 24″ h. x 18″ l. and operates at speeds of up to 112 r.p.m.

•

New Products for British Riker

Riker Laboratories, Ltd., Loughborough (Leics.) British affiliate of the American aerosol pharmaceutical marketer, recently introduced two new aerosol pharmaceutical products. One, called "Rikospray" silicone is a treatment for bedsores and diaper rash, and is said to protect the skin in such conditions as ileostomies and colostomies. The other, called "Rikospray" benzocaine, is a water-miscible topical analgeisic for mucous membrane surfaces in gynacological and proctological procedures.

•

List New Korlan Uses

The Dow chemical Co., Midland, Mich. recently announced additional registered uses for its new insecticidal chemical Korlan. Included are application as an oil mist spray for control of roaches, as a spray for ants, mosquitoes and silverfish, and for control of chinch bugs in lawns in Florida. Since 1957, when it was first introduced as a fly spray, Dow researchers report that continued research has accounted for the increase in the recommended uses of Korlan.

Recently announced was a Korlan livestock aerosol designed to prevent such conditions as screw worm and maggot infestation of animal wounds. It contains 2.5% active ingredient and is said to give uniform area coverage. The roach spray is said to offer high initial kill along with extended residual activity. Such use, according to Dow, is permissible in restaurants and supermarkets.

•

Russians Up Glass Strength

Scientists working at the D. I. Mendeleev Institute of Chemical Technology report a new technique for increasing the strength of glass by combined chemical and thermal treatment. In the "Proceedings of the Academy of Sciences of the USSR, Chemical Technology Section," the scientists suggest the possible replacement of metals by glass as a structural material, since the bending strength of the glass treated by the new method reportedly becomes greater than that of certain steels.

The experiments were carried out with industrial sheet glass, which was first softened by heating in a furnace to 200°C., and then quickly immersed in a heated organosilicon liquid bath. Hardening was achieved by constant decreases in temperature of the organosilicon liquid by steps of 20°. The glass specimens are then removed from the bath and dried at

AEROFLEX® "P" DIP TUBES

- QUALITY CONTROLLED—Every shipment laboratory tested for crack resistance.
- Ideal for aerosols, atomizers, squeeze bottles and lotion pumps.
- Odorless, non-toxic, resistant to most filler and propellant chemicals, crack resistant through ANCHOR's exclusive formulation of polyethylene.
- Close tolerances maintained. Precision cut and stack packed tubes available.
- Nylon dip tubes extruded for special applications.
- ANCHOR also extrudes in all of the newest materials—polycarbonate, polypropylene, and rigid polyvinyl chlorides . . . offering reliable service and on-time deliveries.

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RAvenswood 9-1494

200°, since higher temperatures bring about considerable relaxation of the stresses established in glass.

The process was reported to increase the bending strength of 3 mm. thick glass by as much as 11 times, with the increase in strength attributed to the simultaneous hardening) of a silicon-oxygen polymer formation (at the moment of quenching) of a silicon-oxygen polymer which heals the microcracks in the glass surface. So far as is known, the process has not yet been tried for bottles or similar containers.

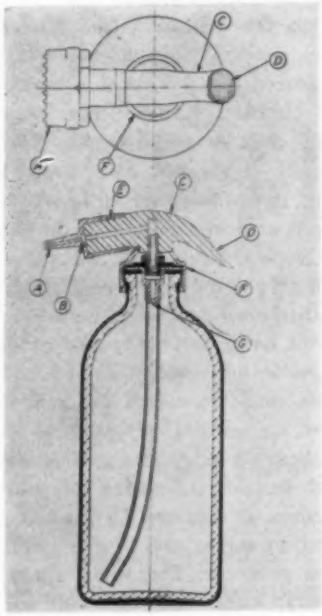
•

Dutch Set Packaging Show

The Sixth International Packaging Exhibition will be held May 2-9, 1961 in Amsterdam's new R.A.I. Exhibition Hall, N.V. 't Raedthuys, Amsterdam, organizer of the exhibition, announced last month. To be called "Macropak," the exhibition is expected to cover all types of packages, packaging materials, and packaging machinery.

Actuator Key to New Product

A unique comb-shaped actuator, used in combination with a non-metallic low-flow aerosol valve, insures that Procter & Gamble's new product "Push Button Lilt" waving cream, will be applied uniformly through the hair. Designed by Procter & Gamble, the unusual actuator features a one-inch wide detachable comb (A) which emits the lotion through a hairline opening between two rows of coarse teeth. The comb, which has two tiny interior orifices (B), where it joins the actuator (C) is made of polyethylene. The double orifice insures that the waving cream is diffused along the full length of the comb, rather than in the center alone. The comb applicator can also be used with the permanent's neutralizer.



The low-flow-rate, non-metallic glass bottle valve is made by The Risdon Manufacturing Co., Naugatuck, Conn., and has an internal restriction (G) to control the flow of the product and to aid in the expansion of the quick-breaking foam formulation. A curved, ribbed finger tip lever (D) at the end of the plastic actuator opens and closes the aerosol valve. The ribbing makes the actuator easy to operate, even with wet hands.

The opposite end (E) of the actuator, adjoining the comb applicator is 7/16th of an inch in diameter and has a small single orifice in the center of the actuator opening. The actuator slips into a notched plastic collar (F) which covers the metal valve ferrule and maintains the correct alignment of the actuator with the dip tube. A marking on the valve ferrule indicates where the dip tube should be placed during the filling operation.

•

New Thomasson Filling Line

Thomasson of Pennsylvania, Inc, Norristown, Pa., has just announced the installation of a new pressure filling line at its Norristown plant. Designed primarily to handle paint products, the line has been equipped with a multiple ingredient supply piping system which is expected to make it also practical for filling a wide range of non-paint products. It features a rotary crimper and gasser and will operate at speeds of 120 six-ounce containers per minute.

Plasti-Kote Sets Ad Campaign

A new merchandising campaign featuring consumer and trade advertising, and giant-sized portable replicas of aerosol spray paint cans, has been announced by Plasti-Kote, Inc., Cleveland, a leading aerosol paint manufacturer. Key to the campaign is a giant-sized replica of the Plasti-Kote aerosol paint can, which serves

as a portable merchandising kit that each Plasti-Kote salesman can carry with him, and a point-of-sale display that can sit by a cash register, hang in a window, hang from a ceiling, or stick to a wall. The big can, lithographed to look exactly like the real product, is 18" high and 6" in diameter. It will be used by company salesmen and wholesaler salesmen.

A smaller size, 13½" high by 4½" in diameter, is also available for retailers. The top of the can comes off and inside is information on the complete Plasti-Kote merchandising, advertising and sales story. This includes a new catalog on the spray paint line, window streamers, price sheets, rush order forms, color swatches, retailer ad mats, and "how to" spray paint booklets.

A consumer advertising campaign will run in *Life Magazine*, and what is described as the largest trade advertising campaign in the history of the company will be placed in *Jobber Topics, Jobber Product News, Southern Automotive Journal, Automotive Retailer, Aerosol Age, Automotive Chain Store, Hardware Age,* and various editions of *Chain Store Magazine.* The theme of the trade advertising campaign for the new merchandising kit will be . . . "Here's a Spray Paint Selling Aid to Hang Your Hat On."

Other features of the new campaign include new point-of-sale racks with slanted shelves and identification strips for use in large self-service retail outlets. Alan M. Shapiro Advertising of Philadelphia created the campaign for Plasti-Kote, Inc.

FMC Advances Reed, Garman

Food Machinery and Chemical Corp., New York, last month named Sherman K. Reed director of research for its Chemical Divisions. He replaces Dr. Emil Ott, who resigned recently as vice-president for research and development to devote himself to academic activities. Dr. Ott will continue as part-time consultant for the company.

Dr. Reed had been director of research and development for FMC's Chemicals & Plastics Division. He joined the corporation in 1950 and held research positions with the Chlor-Alkali and Niagara Chemical Divisions. He received his B.S. degree from Illinois University and Ph.D. degree from Cornell.

He is succeeded as research and development director of the Chemicals & Plastics Division by Dr. John A. Garman, who was manager of organic chemical research at FMC's Baltimore laboratory.

•

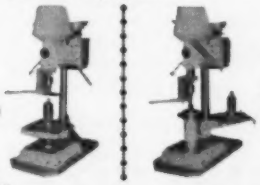
CIBS Host to Dooley

Dr. Thomas A. Dooley, co-founder of Medico (left), was guest speaker at the annual Ladies' Day Luncheon of the Cosmetic Industry Buyers and Suppliers Association recently. Left to right, Dr. Dooley, his assistant, Mrs. G. Sassano, and Lamson Scovill, president, CIBS.

NEW COMBINATION
CAPPER
FOR AEROSOLS

BUILDER'S NEW "Combination Drill Press Capper" for Aerosol Bottles and Cans has a Production Rate of approximately 2 per minute with Aerosol Bottles . . . 8 per minute with Aerosol Cans.

BUILDER'S CAPPERS can be used as a DRILL PRESS where Aerosol Production does not employ it Full time. Foot Switch included for use when Capping Bottles.



DIMENSIONS:
Base Size: 14x24", Height: 30", 110 Volt AC, ¼ HP Motor
Aerosol Bottle Capper.....$208.00
Can Capping Attachment.....$160.00

BUILDERS PRODUCTS
Division of BUILDERS SHEET METAL WORKS, Inc.

Left to right—TMC 2, 3, 10 and 5 lb. King Size Disposable Aerosol Containers

Don't Overlook This Potent New Sales Approach

● Mr. and Mrs. America are sold on Aerosol Packaging. Industry sales figures prove it.

You can now take advantage of Aerosol Sales Building results in a BIG way. Big King size TMC Aerosol Containers now make it possible to not only increase your dollars per sale, but open up new volume markets.

In addition, they provide the basis for new product design including fire extinguishers, first aid oxygen units, blow torches, camp stoves, lanterns and many other volume sellers.

TMC KING SIZE Disposable Containers

Available in a wide range of sizes including 2, 3, 5 and 10 lb. water capacities for working pressures up to 240 psi — ICC approved.

A letter or phone call, LUdlow 7900, will bring you some potent facts based on successful users.

TUBE MANIFOLD
CORPORATION

419 BRYANT STREET N. TONAWANDA, N. Y.

Shapiro to Anchor Post

Anchor Plastics Co., Long Island City, N. Y. extruders of aerosol dip tubing and other plastic components,

Jay B. Shapiro

last month announced the appointment of Jay B. Shapiro as vice-president in charge of sales. Previously regional sales manager of the company for New York, New Jersey, and Pennsylvania, he joined the company 12 years ago. He will also be sales manager of Anchor Industrial Co., an Anchor subsidiary.

●

Revlon Buys Balmain Firm

Revlon, Inc., New York, through its affiliated company in France, last month acquired control of Les Parfums Pierre Balmain S.A., Paris. The acquisition gives Revlon worldwide rights to manufacture and distribute perfumes and allied cosmetic products under the Balmain name, including domestic distribution rights for Balmain perfumes formerly held by the Natone Co., Los Angeles. It does not involve other enterprises in the fashion and retailing fields owned by Pierre Balmain, one of the world's leading fashion designers. Financial details of the transaction were not announced.

"This step is intended to increase further Revlon's participation in the worldwide market for fine perfumes and cosmetics," Revlon president Charles Revson said. "Balmain's 'Jolie Madame', 'Vent Vert', and 'Monsieur Balmain' are among the favorites of women and men who enjoy fine perfumes."

In the fall, Revlon will present to the U. S. market its new "Intimate" perfume, which is produced in France, Mr. Revson said. In addition, Revlon obtained in 1959 the distribution the U. C., Canada, and the United Kingdom of perfumes and fragrances of Parfums Revillon, Paris, including "Carnet de Bal" and "Detchema."

New "Genetron" Plant Slated for Elizabeth, N. J.

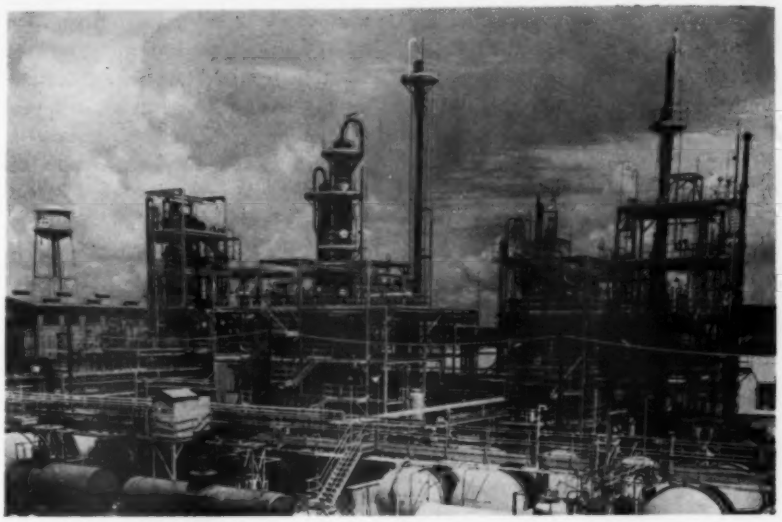
PLANS to build a large new plant at Elizabeth, N. J. to produce its "Genetron" line of fluorinated hydrocarbon refrigerants and aerosol propellants were revealed late last month by Allied Chemical's General Chemical Division, New York. The plant will be built on a site at its Elizabeth Works, where the company now produces sulfuric acid for industrial consumers in New York and New England and has bulk storage facilities for "Genetrons."

The new "Genetron" facility, the company's third such plant, will increase General's over-all capacity by more than a third. Other plants are at Baton Rouge, La. and Danville, Ill.

Initial products to be produced are the three aerosol propellants and refrigerants: Genetron 12 (dichlorodifluoromethane) Genetron 11 (trichloromonofluoromethane) and Genetron 22 (monochlorodifluoromethane). "Genetrons" 11 and 12 have extensive use as propellants for most types of aerosol products. In addition, "Genetron" 11 is employed as a blowing agent for rigid and flexible urethane foams, and as a solvent.

Construction will begin immediately and is scheduled for completion early in 1961. "The Elizabeth, N. J. site has been chosen to enable us to provide maximum service to consumers located along the Eastern Seaboard," Frank J. French, General Chemical Division President noted.

General Chemical is the nation's primary producer of hydrofluoric acid, fluorine and the organic and inorganic compounds made from them. In addition to its Genetron plants at Baton Rouge and Danville, it produces fluorine compounds at Marcus Hook, Pa., North Claymont, Delaware, Nitro, West Virginia and Bay Point (San Francisco), California. It also has extensive fluospar mines and reserves providing the basic raw materials for such chemicals.



Counterpart of the projected plant is this one at Baton Rouge, La., one of two such General Chemical production centers.

Monroe Danford Moves Office

Monroe Danford and Co. last month moved its sales office to 974 Boulevard East, Weehawken, N. J. The company sells aerosol perfume containers and caps for Metal Fabrications, Inc., and other component suppliers.

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Aerosol Book "Out of Print"

"Pressurized Packaging (Aerosols)," by Herzka and Pickthall, is out of print. A second printing will be ready sometime this fall.

CSMA Lists Details for 1960 Aerosol Package Contest

THE Chemical Specialties Manufacturers Association last month issued complete details and rules for its 1960 Aerosol Package Contest, the ninth annual such contest to select the best aerosol package in a number of product categories. Announcement of the winners will take place at the CSMA's 47th annual meeting at Hollywood Beach Hotel, Hollywood Florida, Dec. 5-8.

This year the contest will select winners in 15 categories, in addition to one grand prize winner for the "best in contest." Awards are made on the basis of general sales appeal of the complete package, and the product must have been freely offered for sale prior to Sept. 1, 1960. Entries close Oct. 15, and must be sent to the CSMA office (with an entry blank) by that date. There are no entry fees and the packages cannot be returned.

Categories this year include:

1. Automotive
2. Insecticides, Repellents, and Moth Proofers
3. Room Deodorants
4. Paints, Enamels Other Protective Coatings, and Paint Remover
5. Other Household Products (polishes, glass cleaner, rug shampoo, water repellents, shoe polishes, snow, etc.)
6. Shave Products
7. Hair Preparations
8. Perfumes, Colognes, and Toilet Waters
9. Other Personal Products (dentifrices, shampoos, body deodorants, sun tan oil, etc.)
10. Food Products
11. Horticultural Products
12. Medicinal and Pharmaceutical Products
13. Veterinary and Pet Products
14. Industrial Products
15. Foreign Products

The last category is a new one for products submitted by companies outside the U. S. According to the CSMA's "Package Contest Committee" these entries will be judged in the appropriate categories and then judged collectively for the best foreign entry submitted.

•

Lesch Colgate Chief Exec

George H. Lesch, recently elected president of Colgate-Palmolive Co., New York, last month was named chief executive officer. He succeeds Edward H. Little, board chairman, who retired as chief executive after holding the position since 1938. Mr. Little, 79, continues as board chairman, but will have a largely advisory capacity.

When Mr. Little became president and chief executive officer of Colgate in 1938 the company's world wide sales were under $100 million and profits for the preceding year were $782,000. Sales are currently at the rate of $600 million and profits last year were over $25 million. He joined the company in 1902.

Mr. Lesch was elected president

NOW...
SUPERIOR SERVICE
for the
AEROSOL INDUSTRY
FLUTED STACKERS
SEMI-DOMED
PLAIN DOMED
PLAIN STACKERS
We also manufacture tin plate Screw Caps from 18mm to 120mm.
PENN, known for finest service to the bottling industry for over 25 years, is now making tops for aerosol containers.
All of Penn's customers receive superior service and careful attention on every order. You are assured of top quality workmanship, the right price and immediate delivery.
Call or write for information.
Penn
CORK & CLOSURES, INC.
1155 MANHATTAN AVE., BROOKLYN 22, N. Y.
EVergreen 9-4416

last April. He joined the company in 1932 as an auditor and in 1939 became office manager of Colgate's Mexican subsidiary. In 1955 he was named president and general manager of the Mexican subsidiary and that same year was made vice-president for European sales and advertising of Colgate-Palmolive International. Two years later he became president of C-P International and a vice-president and director of the parent company.

•

Pennsalt Adds to Isotron Line

Production of "Isotron 13," for low temperature environmental refrigeration applications has been started by Pennsalt Chemicals Corp., Philadelphia. The sixth in the company's line of fluorocarbons, "Isotron 13" will be available in 80, 23, and 5-pound cylinders.

"Isotron 13" (monochlorotrifluoromethane) can be used to produce temperatures below —100°F. It is expected to be particularly useful in low-temperature research and testing where exceptionally low environmental temperatures are desired such as for aircraft and missiles, electronics, automotive, petroleum and chemistry.

Pennsalt refrigeration technicians report that "Isotron 13" will have the same exacting control for low-moisture content as for its other Isotrons and that this standard is protected by factory sealing.

•

Lillian Dodge is Dead

Mrs. Lillian Sefton Dodge, former president of Harriet Hubbard Ayer, Inc., New York cosmetic manufacturer, died last month. She sold the company in 1947 to Lever Brothers for $5.5 million, and the company has since become a part of Nestle LeMur. In 1938 Mrs. Dodge was revealed through publication of an income list as the highest paid woman executive in the U. S. Her salary was $100,000 a year.

Mrs. Dodge assumed control of the company at the death of her first husband, Vincent Thomas, in 1918. Her second husband was Robert Leftwich Dodge, an artist who did stained glass windows.

Gardner Leaves Powr-Pak

Fred Gardner, sales manager of Powr-Pak, Inc., Bridgeport, Conn., custom filler, has left that company. Prior to his association with Powr-Pak he served as sales manager of Aerosol Techniques, Inc., also of Bridgeport.

•

Walton M. Wheeler Dies

Walton M. Wheeler, Jr., vice president, secretary, and general counsel of Eli Lilly & Co., Indianapolis, died July 4 at the age of 52. He had been with the firm for 24 years and was elected secretary in 1944 and vice president in 1954.

•

Jack Finn Heads Whitehall

Jack Finn has been named executive vice president of Whitehall Laboratories Division of American Home Products Corp., New York. Well known in the drug field, he joined Whitehall as chain store and syndicate sales manager in 1952. He was made a vice president in 1957 and in 1959 elevated to vice president-administration. Before joining Whitehall, Mr. Finn was associated with the Biow Advertising Agency, coming there from the Barbasol Co. where he was vice president.

A graduate of Rhode Island State College, Mr. Finn has had a long career in the sales field. Prior to nine years with Barbasol, he was with the Gillette Co. for nine years.

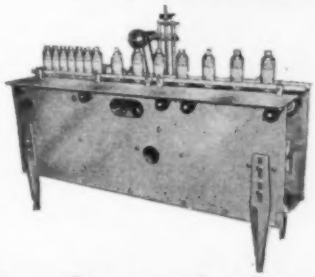
•

Defense Contract Booklet

Formation of small business pools, in which small concerns pool their facilities, finances and skills to undertake defense contracts or research and development, is explained in a 24-page booklet just issued by the Small Business Administration. A foreword by Administrator Philip McCallum tells how SBA helps in formation of the pools and aids them in obtaining and carrying out Government contracts. The booklet, titled "Small Business Pooling for Defense Production and Research and Devel-

KIWI®

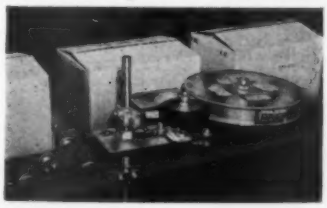
AEROSOL CODE DATING EQUIPMENT
that has *earned* industry acceptance



POWER DRIVEN CODER

With work table area.
For automatic code dating of concave bottoms of aerosol cans.
Will mark top, bottom, or both at the same time.

Something new has been added . . .



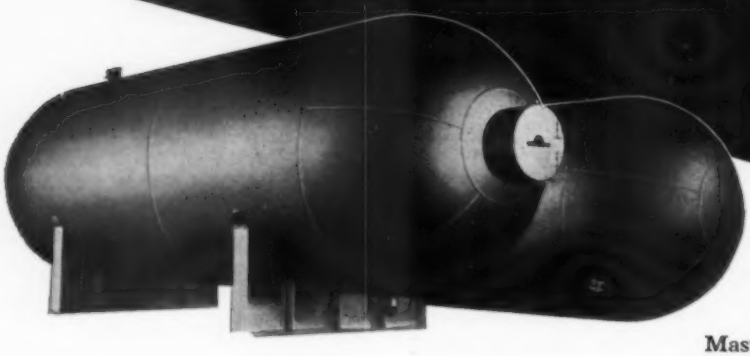
CASE CODE DATER
with Kiwi built-in rubber band type.

- No loose type to become lost
- Ink just once per shift
- Never needs cleaning
- Inker never dries out
- Prints in the same place on every case

Also . . .
case printers for consecutive numbering or printing information on cases

KIWI® CODERS CORPORATION
Dept. AA, 4027 N. KEDZIE AVE. CHICAGO 18, ILL.

PROPELLANT PRESSURE VESSELS of all sizes



Engineered to fit your requirements

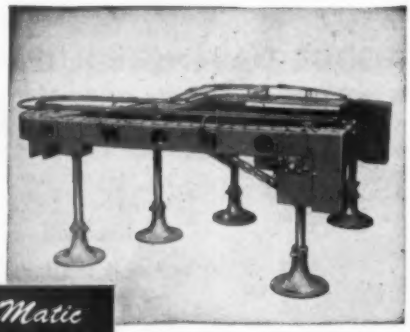
FROM 150 GALLONS TO 70,000 GALLONS

Master Tank & Welding, one of the oldest fabricators of ASME pressure vessels for the petroleum and the butane-propane industries, is now producing propellant pressure vessels for the aerosol industry. Both Master plants at Dallas, Texas, and Quincy, Illinois, are equipped with the most modern steel fabricating equipment to assure you of the utmost in safety and quality. This modern equipment also means competitive prices. Send us your specifications for quotation and delivery. No obligation, of course.

MASTER TANK & WELDING

P.O. Box 5146 — Dallas, Texas — Riverside 7-2441 2000 S. Front St. — Quincy, Illinois — BAldwin 3-5014

Reduce Handling Costs!



Styl-O-Matic
LATERAL CURVE BOTTLE & CONTAINER CONVEYOR

KEEPS PRODUCTION FLOWING SMOOTHLY

A VERSATILE, economical unit for the food, dairy, beverage, etc. field. Conveys in straight line, around curves (0° to 180°) and up or down normal inclines or declines. Available in steel or stainless steel, with or without pack-off tables. Only one power unit is needed as there are no corner brackets.

WRITE FOR FREE BULLETIN

about this flexible, smooth operating unit that lowers costs and increases production. Ask for Bulletin No. ST-3c Dept. AA-8

ISLAND EQUIPMENT CORP.
P. O. Box 380276
Miami 38, Florida

New at the aerosol game?

a subscription to *Aerosol Age*, the magazine of pressurized packaging, will keep you informed about technical developments, general news, new patents and trademarks, and other items of interest about this most exciting facet of the packaging field.

opment," is being made available to small business concerns by SBA field offices throughout the United States.

Opening pages of the booklet explain the purposes of small business pools, their forms or organization and operating methods. Other sections discuss "Primary Advantages Pooling Offers Small Plants" and give guides to formation and operation. Federal and state laws affecting formation and operation of pools are covered, including the Federal antitrust laws, the Federal Trade Commission Act, the Walsh-Healey Public Contracts Act, and the Fair Labor Standards Act. Necessary conditions for Government approval of a small business pool also are explained, followed by a description of the step-by-step procedures involved in organizing a pool.

The role the Small Business Administration plays in the formation and conduct of small business pools is fully explained. After the Agency has approved a small business pool, the booklet says, it sends information about the pool to officials of Government agencies which account for the major share of Government purchasing. It also has suitable Government purchases reserved for award to small business concerns or small business pools on a competitive bid basis.

SBA may assist the small business pools in other ways, the booklet points out. For example, it will consider providing the pool needed financing if private financing is not available on reasonable terms. It also will supply a pool information on patented products and processes available for use through licensing, purchase or other commercial arrangement; will give technical assistance in the general field of production; and will give advice and publications on management problems and methods.

•

Burton to Nat. Starch Post

John L. Burton has been named supervisor of technical service for National Starch & Chemical Co. (Canada) Ltd., Toronto, an affiliate of National Starch & Chemical Corp., New York.

Aerosol Advertisers Show Growing Preference for Spot and Network Television Commercials

NETWORK television as an advertising medium, has moved far ahead of all others in the advertising outlays of aerosol marketers, a new study by *Drug Trade News* has revealed. The data was compiled from the findings of the Publishers Information Bureau of the Bureau of Advertising of the American Newspaper Publishers Association.

Altogether, advertising expenditures by marketers of toiletries and toliet goods totaled nearly $243 million, an increase of 2.6% over the expenditure for 1958. Biggest gainer among the major advertising media was spot television, which recorded a gain of 16% in the toilet goods industry.

Brand-by-Brand List of Ad Expenditures

June 13, 1960 • Drug Trade News

(Add 000)

Product	*General Magazines*	*Farm Magazines*	*News-papers*	*Newspaper Sections*	*Network TV*	*Spot TV*
COLD PREPARATIONS						
Pertussin Vapor Spray	.....	.....	.....	.....	60	3
Vasol Spray Vaporizer & Hal & Gene	13	.....	4	3	.....	11
PET PRODUCTS						
Sergeant's Pet Care Products	150	24	.....	.....	545	6
TOOTH PASTES						
Colgate Aerosol Dental Cream	.....	.....	.....	.....	79	.....
Colgate Dental Cream & Aerosol Dental Cream	.....	.....	.....	.....	5,910	.....
Crest Tooth Paste & Aerosol Tooth Paste	.....	.....	.....	.....	39	.....
Gleem Tooth Paste & Aerosol Tooth Paste	.....	.....	.....	.....	5,419	.....
Ipana Tooth Paste & Touch N Brush Tooth Paste	.....	.....	.....	.....	348	.....
Pepsodent Tooth Paste & Aerosol Tooth Paste	.....	.....	.....	.....	2,540	.....
HAIR PRODUCTS						
Adorn Hair Spray	.....	.....	.....	166	1,323	412
Breck's Hair Set Mist	254	.....	.....	42	303	.....
Helene Curtis Spray Net	170	.....	.....	869	38	225
Helene Curtis Tempo Hair Spray	29	.....	.....	.....	400	80
Max Factor Sof-Set Spray & Curl Control	.....	.....	.....	.....	.....	31
Revlon Hair Sprays	250	.....	.....	.....	.....	.....
Revlon Living Curl	.....	.....	.....	.....	869	108
Revlon Satin-Set Pin Curl Spray	.....	.....	12	.....	.....	406
Shulton Hair Spray	79	.....	.....	.....	.....	.....
SHAVING CREAMS						
Aeroshave	.....	.....	99	.....	672	188
Aqua Velva & Williams Instant Shave	.....	.....	37	.....	.....	.....
Barbasol	97	.....	55	.....	.....	.....
Colgate Rapid Shave Cream	.....	.....	.....	214	70	323
Gillette Foamy Shave	.....	.....	.....	.....	707	.....
Gillette Shaving Preparations	.....	.....	.....	.....	32	.....
Mennen's Foam Shave	3	.....	.....	.....	163	.....
Molle Shaving Cream	83	.....	194	24	.....	.....
Old Spice Shaving Cream	110	.....	.....	47	84	6
Rise Shaving Cream	.....	.....	3	.....	1,156	373
Williams Shaving Preparations	.....	.....	.....	.....	816	10
Yardley Shaving Preparations	162	.....	.....	.....	.....	.....

(*Continued on Page* 77)

druk pak INC.

Supplying internationally for aerosols

- Laboratory Equipment
- Production Machines, All Types
- Formulations and Concentrates
- Plant Layout — Consultation

1. Laboratory Clincher DP-104 Inter-changeable Tools for Metal Cans and Glass Bottles.

2. Laboratory and Small-Run Pressure Loader DP-110

3. Propellant Pump WM-DP 385 Fully automatic, compressed air operated. Empties cylinders, mixes propellants, guarantees liquefaction.

4. Valve Clincher WM-DP 350 Semi-automatic, compressed air operated. Capacity: 28-30 per min.

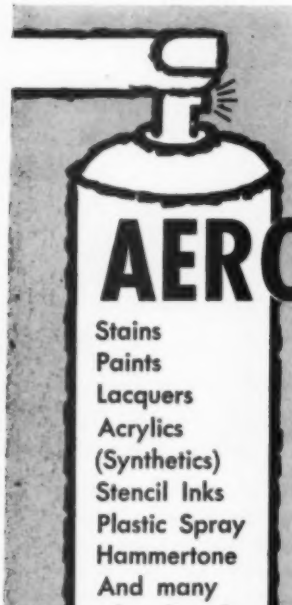
5. Nitrogen Gasser WMP-DP 390 Semi-automatic, compressed air operated. Capacity: 28-30 per min.

Catalogues and Prices on Request

Manufacturer:
Johann Waldherr O.H.G.
Kafertaler Strasse 162
Mannheim, Germany

Sales Representative:

druk pak, inc.
Merkurstrasse 36
Zurich F
Switzerland



Formulators and Fillers

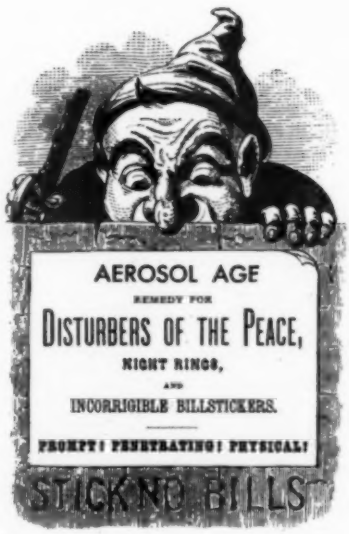
AEROSOLS

Stains
Paints
Lacquers
Acrylics
(Synthetics)
Stencil Inks
Plastic Spray
Hammertone
And many
other liquids

We excel in research, production and special color matching. We are prepared to handle all runs no matter how large or how small.

MOHAWK FURNITURE FINISHING PRODUCTS, INC.

175 W. Main St. Amsterdam, N. Y.
88-05 101st Ave. Ozone Park, N.Y.C., N. Y.
3809 Burbank Blvd. Burbank, Calif.



Have technical problems?

Aerosol Age is the best way to keep up with new packaging techniques, developments, products.

"Better take Hobson off that vitamin filling job!"

1959 Advertising Expenditures

(*From Page 75*)

HOUSEHOLD SUPPLIES						
Airwick Room Deodorizer	10	.....	55	.....	640	199
Antrol Insecticides	21	.....	.....	.....	.....	.....
Antrol Rose Spray	.....	.....	24	.....	.....	.....
Black Flag	.....	.....	.....	.....	569	472
End O'Pest & End O'Weed	118	.....	.....	.....	.....	.....
Off Insect Repellent	.....	.....	.....	.....	169	.....
Real-Kill Household Insecticide	153	.....	234	.....	.....	.....
Esquire Shoe Polish	361	.....	.....	.....	.....	1,510
Eveready Garden Products	.....	6	99	.....	.....	.....
Florient Room Deodorant	.....	.....	530	452	1,304	325
Good-Aire	46	.....	152	20	.....	9
Griffin Shoe Polishes	13	.....	.....	.....	555	86
6-12 Repellent	76	.....	66	66	.....	.....
Slug-A-Bug Insecticide	.....	.....	.....	.....	.....	131
Wizard Deodorizers	.....	.....	.....	.....	581	189
PERFUMES & FRAGRANCES						
Bourjois Perfumes	113	.....	.....	11	.....	.....
Caron Perfumes	117	.....	.....	.....	.....	.....
Carven Perfumes	35	.....	.....	.....	.....	.....
Chanel Perfumes	476	.....	.....	9	.....	350
Ciro Perfumes	62	.....	.....	.....	.....	.....
Corday Perfumes	82	.....	.....	.....	.....	.....
Coty Perfumes & Colognes	147	.....	.....	.....	34	190
Dana Perfumes & Powder	162	.....	.....	17	.....	.....
Dorothy Gray Perfumes	55	.....	.....	.....	.....	.....
D'Orsay Perfumes	45	.....	.....	6	.....	.....
Elizabeth Arden Perfumes	44	.....	.....	5	.....	.....
Evyan Perfumes	90	.....	.....	2	.....	.....
Germaine Monteil Perfumes	56	.....	.....	.....	.....	.....
Guerlain Perfumes	155	.....	.....	9	.....	.....
Houbigant Perfume	.....	.....	.....	.....	.....	22
Lentheric Perfumes	137	.....	.....	.....	19	199
Max Factor Perfumes	97	.....	.....	.....	.....	23
Prince Matchabelli Perfume	331	.....	.....	.....	.....	65
Revlon Perfumes	179	.....	.....	2	170	.....
Lanvin Perfumes	296	.....	.....	8	72	785
Tuvache Perfumes	22	.....	.....	.....	.....	.....
Weil Parfums	30	.....	.....	.....	.....	.....
Wrisley Fragrances	50	.....	.....	17	34	.....
Yardley Perfume & Cologne	259	.....	.....	.....	.....	.....
Yardley Spray Mist	109	.....	.....	.....	.....	.....

Late Classified

SITUATION WANTED

Sales/Sales Management. Over ten years association with aerosol packaging and chemicals. Well known in industry with best contacts and references. Excellent educational background. Write Box 228, c/o Aerosol Age.

Enters U. S. Drug Field

Farbwerke Hoechst AG, major West German drug firm (and also a leading German producer of aerosol propellants) last month moved into the U. S. drug trade with the purchase of Lloyd Brothers, Inc., long-established and respected Cincinnati drug marketer. The purchase was accomplished by Intercontinental Chemical Corp., New York, Hoechst's American subsidiary.

Previously, the only interest Hoechst had on the American drug market was a licensing pact to enable Upjohn to produce and sell Hoechst's oral anti-diabetic agent "Orinase."

Lloyd Brothers, although recently overshadowed by product developments of younger firms, at the turn of the century was the acknowledged leader of the drug industry. The company, in the ethical drug business for 90 years, was one of the founders of the American Drug Manufacturers Association, now the Pharmaceutical Manufacturers Association.

•

Wallerstein Names Barmak

Leonard Barmak has been appointed as sales representative for the Pharmaceutical Division at the Wallerstein Co., Staten Island, N. Y. He joined the company in July, 1959, as a member of its Commercial Development group.

Mr. Barmak received his B.S. in Pharmacy from the College of Pharmacy, Columbia University, in 1951, and his M.B.A. from Babson Institute, Wellesley, Mass., in 1956. He is a registered pharmacist in the states of New York and Massachusetts.

Previous to joining the Wallerstein Company, Mr. Barmak was associated with Drug Data Publications, Brookline, Mass., from 1958 to 1959. There he developed the "DrugDex System," a price and inventory turnover control for prescription products. From 1956 to 1958 he was a sales representative for Riker Laboratories, Los Angeles. Between 1953 and 1956 he worked as a store manager and registered pharmacist in Boston.

"I told you it wasn't like filling vinegar bottles!"

Williams Possible HEW Secretary

G. Mennen "Soapy" Williams is the logical candidate to become Secretary of Health, Education and Welfare in the event of a Kennedy victory in November, Washington observers predicted last month. Mr. Williams, Governor of Michigan and a strong proponent of the welfare state, is looked upon as the Kennedy choice for either the HEW or Labor cabinet posts.

Other Washington observers contended last month that no matter *which* party wins in November, the Department of Health, Education and Welfare is going to take a more aggressive position on the needs of the consumer. This prediction came in the wake of new efforts by the Republican Administration to strengthen the powers of the HEW and its Food and Drug Administration section.

NOW... all the solids formulated in a single stick for loading

SNOW

you just drop it into your aerosol container before you add your propellant and valve.

Licensed under Patent 2,764,454

- Gives you an amazingly simple production.
- Gives you important savings in costs.
- Assures precision cold or pressure filling.
- No dust or boil-over. No mixing of powders.
- Standard colors are WHITE, RED, and BLUE. For special colors, send sample for matching.

Write for Information and Samples to

BALTIC CHEMICAL

113-119 Fourth Ave., Brooklyn 17, N. Y.

NATIONAL SPRAY CAN FILLING CORP.

6202 Avenue U • Brooklyn, N.Y. • CL 1-3350

everything up to date...

Our clients are looking at the world through rose colored glasses. They know our special skill and care insures the best solution to any aerosol problem they entrust to us. Why don't you find out for yourself. All inquiries confidential.

- Insecticides • Paints
- Cosmetics • Pharmaceuticals
- Chemicals • Foam Products
- Many others.

PACKERS

ATTENTION MARKETERS!

The leading custom and contract fillers operating in each area are listed on the following pages.

EAST

Old Empire

AEROSOL FILLING
AEROSOL CONCENTRATES
SHAVE CREAM
HAIR LACQUER
COSMETIC SPECIALTIES
PHARMACEUTICAL SPECIALTIES

MT. PROSPECT & VERONA AVES.
NEWARK, N. J. • HUMBOLDT 4-2121
N.Y.C. WORTH 4-7870

Thomasson

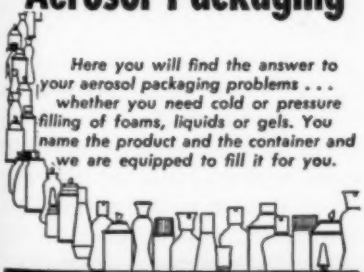
OF PA., INC.
AEROSOL FILLING
for Contract and Private Label Marketers

Also Liquid Filling

Complete Research and Laboratory Facilities
Constant Quality Control

Norristown, Pa. BRoadway 5-4355

Aerosol Packaging



Here you will find the answer to your aerosol packaging problems . . . whether you need cold or pressure filling of foams, liquids or gels. You name the product and the container and we are equipped to fill it for you.

POWR-PAK, INC.
145 Howard Ave., Bridgeport, Conn.

EAST

CONSOLIDATED AEROSOL CORPORATION

Custom and private label. Aerosol filling. Cosmetics, pharmaceuticals and chemical specialties in metal, plastic and glass.

Rigid inspection and quality control in one of the most modern plants in the East

CONSOLIDATED AEROSOL CORPORATION
1325 Second Ave.
New Hyde Park, N. Y.
HUnter 8-2330

STANDARDS MAINTAINED • FORMULAS PROTECTED • QUALITY AEROSOLS •

AEROSOL PACKAGING
LIQUID FILLING
production runs • sample runs
product formulations

pace incorporated
P.O. Box 206 • WILMINGTON 99, DEL. • EAST 8-4151

Armstrong Laboratories

CUSTOM, CONTRACT AND PRIVATE LABEL FILLERS OF METAL, GLASS AND PLASTIC AEROSOL CONTAINERS

SEPARATE AEROSOL PHARMACEUTICAL FACILITIES

WRITE OR CALL:
ARMSTRONG LABORATORIES
421 *La Grange Street*
West Roxbury, Boston 32, Mass.
FAirview 3-7404

EAST

QUALITY & SERVICE IN AEROSOL CUSTOM FILLING...

STALFORT PRESSURE-PAK CORP.
321 W. PRATT ST., BALTO. 1, MD.

SUN-LAC INC.
"Successful through Service"
274 LAFAYETTE ST. NEWARK 5, N. J.

Aerosol Packaging
Small Runs Solicited
on
Cosmetics, Creams, Foams, Perfumes, Powders, Household Items, Insecticides, Industrial Products, & Plastic Sprays.

We formulate and develop new products. Quality controlled productions; bulk storage facilities; pressure & "Cold Fill" facilities. Special plan for companies requiring national distribution. We supply samples and do experimental work at no charge. Write or phone MA 3-7727 for full information.

Powders—Liquids—Emulsions

Private Label and Contract Aerosol Packaging

PURITAN AEROSOL CORPORATION

- Complete research and lab facilities
- Packaging and marketing help
- Pressure and "Cold Fill"
- Metal, Glass, or Plastic Containers
- Excellent warehousing and shipping facilities

160 WASHINGTON ST. NORTH
BOSTON 14, MASS. RI. 2-3318

Chemicals, Cosmetics, Pharmaceuticals

EAST

IMAGINATION • CREATION • REALIZATION

ATi

AEROSOL TECHNIQUES
INCORPORATED

Exclusively private label manufacturer of aerosol cosmetics, pharmaceuticals and chemical specialties.

Bridgeport 5, Conn. EDison 6-0176

FLUID CHEMICAL CO., INC.

1st in Contract Packaging

★ Aerosols

★ Liquid Filling

885-A MT. PROSPECT AVE.
NEWARK, N. J.
HUmboldt 5-2880

Quality
AEROSOL FILLING

we will fill only for customers and market no product line of our own

Eska CHEMICAL CORP.
352 Livonia Ave.
Brooklyn, N. Y.
Phone: Dickens 2-5205

To All Buyers of
AEROSOL PRODUCTS:

Here are the advantages of a modern manufacturing plant built upon a foundation of over 30 years experience:
1. Contract fillers of both bottles and cans.
2. Pressure and "Cold Fill" facilities.
3. Modern up-to-date, compounding facilities.
4. Complete research and control laboratory.
5. Free product development and sampling.
6. Free Products Liability Insurance.
7. Centrally located plant.
8. Our modern materials handling and shipping rooms can also handle your drop-shipments.

ASSOCIATED BRANDS, INC.
50 WALLABOUT ST., BROOKLYN 11, N.Y.
Tel. ULster 5-2900

SOUTH

We invite you to check our
• QUALITY
• SERVICE
• PRICES

Custom loaders of Aerosols . . . specializing in the cosmetic & sanitary supply products. Private label stock available. Strict quality controls.

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Rutgers Perfumery Courses

A two-year evening program in the chemistry and compounding of perfumery was announced last month by the Rutgers University Newark Extension Center. The new program, which will begin this fall, will include lectures and laboratory courses in perfumery and essential oils during the first year, and lectures and laboratory sessions in advanced perfumery during the second year. For those who can meet the necessary college chemistry requirements, a one semester course in "The Chemistry of Perfume Materials" is scheduled also this fall at the Newark Extension Center.

The first year's subject in the new perfume series covers the various natural perfumery raw materials, including their application, identification, origin, and availability; as well as synthetic perfume chemicals, including their availability, cost, adulteration, and contamination. The lecture part of the course will be given on Monday evenings from 6:20 to 8:00, to be followed by the laboratory session from 8:10 to 9:50, beginning Sept. 19.

The "Chemistry of Perfume Materials" meets on Wednesdays from 6:20 to 8:00 p.m., beginning Sept. 21st. This subject covers the chemistry of essential perfume oils and terpenes, their reactions, properties, and synthesis.

Steffen Arctander, noted European perfumer now with International Flavors and Fragrances, Inc., New York, instructs the Rutgers perfume classes. He is currently on his seventh trip to Africa to search out and study essential oils for perfume. His new book on natural perfume materials is expected to be published this fall.

The second year "Advanced Perfumery" course continues the study of the art of perfumery as related to chemistry. This course is especially useful to individuals who seek advanced training in the identification, compounding, and manufacture of natural and synthetic aromatics.

In announcing the two-year perfume program, Rutgers said that ex-

periments with classes in this subject since 1957 have indicated that a two-year program is essential to cover the major facets of perfume chemistry and compounding. There are hundreds of essential oils and synthetics which must be identified and studied if the student is to become a good perfumer. It is reported that the Rutgers program, which is unique in the U. S., has aroused considerable interest in New Jersey, which does a $125 million annual perfumery and essential oil business. Not only members of the staffs of New Jersey perfume industries participate in the Newark Extension Center classes, but the industries, themselves, have given many rare materials for study and financial support for the project.

Detailed information about the single courses or the two-year program may be secured by writing Newark Extension Center, Rutgers University, 601 Broad St., Newark 2, New Jersey.

•

Jones to New O-I Post

Ebon C. Jones, of Chicago, Western regional sales manager of the Glass Container Division of Owens-Illinois Glass Co., Toledo, has been promoted to the newly created position of Manager of Market Planning and Administration, the company announced last month.

Mr. Jones, who will have his office in O-I's headquarters in Toledo, joined Owens-Illinois in 1940 following graduation from the University of Illinois. He has served as a salesman, assistant branch manager, branch manager, and regional manager during his 20 years with the company.

•

LaPrelle Elected by Kolmar

Kolmar Laboratories, Inc., Port Jervis, N. Y., has elected Thomas LaPrelle, Sr., vice-president in charge of sales. He has been associated with Kolmar since 1945.

•

Coty Names Advertising Director

Coty, Inc., New York cosmetics marketer, has appointed Eugene C. Judd to the position of advertising director. He was formerly with Narragansett Brewing Co.

The Richford Story

(*From Page* 43)

(as much as 35% per year) to the perfume market, but that conventional packaging will "hold its own" because of the price differential and the fact that many customers *still* prefer the conventional bottle.

In addition to a representative in Canada, Richford maintains offices and licensees in Venezuela, Cuba, Chile, Great Britain, Sweden, Belgium, Netherlands, Australia and South Africa. These branches act not only as sales offices, but are relied on to contribute design ideas to Richford's stock of containers & caps.

Mr. Roehrich points out that his company will likely increase its participation in the aerosol industry in the future, particularly by offering new packages and new decorative techniques.★

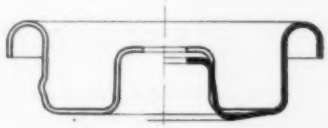
Crimping Problems

(*From Page* 46)

pressure on the bottom of the mounting cup can cause fractures of the metal or disturbance of the internal valve seat. Either or both conditions give rise to leakage.

B. *The Filling Process*

In the filling process, the two main causes of trouble are (a) an excessive contact pressure and (b) excessive contact velocity. If the contact between filling head and pedestal or bottom of the valve mounting cup is too vigorous, a symmetrical or



Drawing 3

asymmetrical deformation can take place (drawing 3).

If the center draw meets the filling head on its entire surface symmetri-

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cally, this leads to a symmetrical deformation, i.e. the center draw is uniformly pushed down into a lower position. This increases the already existing tension created in the metal after the clinching process. The increased draw tension starting at the outer wall of the cup widens the center draw at its base and thereby the valve parts fixed in the pedestal may become loosened (drawing 4). This presents another possibility for

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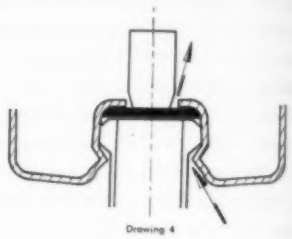
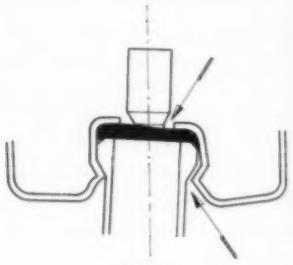
open space and therefore leakage. (The smaller angle between the center draw wall and the bottom of the cup is sometimes easily visible to the naked eye.)



Drawing 4

This occurs principally with filling heads which tighten on the surface of the pedestal. The defect is not necessarily immediately apparent. Sometimes propellant loss can be observed immediately by a lateral movement of the stem (in such deformed cups) but in most cases leakage is first observed after initial actuation of the valve. If during a vigorous contact of the container with the filling head, the valve cup loses its correct vertical position, the result is an asymmetrical cup deformation (drawing 5).



Drawing 5

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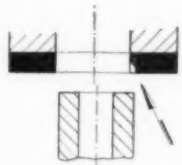
In principle, the results are the same as those of a symmetrical deformation except that the effects are more serious. It is possible that the valve seat washer may be forced into a position in which the orifice of the stem can be partially or entirely exposed, the washer (in extreme cases) being above or below the orifice. When a cup is deformed asymmetrically, losses of propellant can be observed between stem and center hole of the cup as well as between center draw and washer.

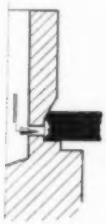
Concentricity

If the valve stem, when brought to the filling head, is *not* positioned *centrally* into the filling head opening but laterally pushed against the filling head's rubber gasket, this rubber gasket is abused.



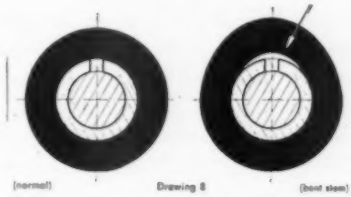
Drawing 6

At first, very small and then successively large rubber particles are torn off and blown into the stem chamber by the filling pressure. De-



Drawing 7

pending upon the dimension of these particles they may lodge in the chamber of the stem and later, with the actuation of the valve, be transported into the button where they can clog the orifice. These particles can also stick in the stem orifice or get through the orifice and remain between stem and washer exactly opposite the orifice, another source of leakage. Furthermore, the stem may become laterally bent whereby its vertical movement is hampered. Since nylon is relatively unelastic, the stem can even break under this strain. If the stem is too oblique, the washer can detach itself from the



Drawing 8

stem on one side, which again results in leakage (drawing 8).

In addition to the above, it is obvious that on an oblique stem the button is also in an oblique position. It may even be difficult or impossible to push the buttons on, since thin walled types of stems can easily have their upper rims torn and bent downward. Also the resultant spray, even on lesser bent stems, can impinge on the lip of the valve mounting cup.★

Authors note:

These notes are not to be over pessimistically construed concerning the manifold dangers in connection with clinching and pressure filling. The problems mentioned *can* and *have* been manifest in the past. As an assistance in avoiding these dangers it is strongly recommended that the clinching and pressure filling "Operational and Maintenance Manuals" be thoroughly studied. Also when in doubt, fillers should consult with valve and container manufacturers concerning their suggestions with respect to type, design, etc. (of valves and containers) recommended for optimum results. Naturally, experience is the best teacher. However, we hope that the indications given in this article may assist new fillers in avoiding some annoying and costly starting problems.

Aircraft Hazards

(*From Page* 40)

5 psi, the question arises — Would this pressure increase be hazardous? Without reservation the answer is negative. Several very sound technical reasons can be given for this lack of concern. First, and most important, is that the bursting strength of even the weakest containers used for aerosol products is about 150 psia. Thus, the pressure must be increased approximately 200% more before the strength of the container is exceeded.

"Another method of demonstrating the safety of aerosol cans under these circumstances is to examine pressure changes with temperature changes. Typical aerosol products show a pressure increase of 2 to 5 psi for every 5°F. increase in temperature. If the temperature in the household were to increase from 70°F. to 90°F.—not an unusual condition for a summer day — an aerosol can under the same conditions would show a pressure increase of 8 to 20 psi, depending upon what the product might be. Of the many hundreds of millions of aerosol cans produced, none has been known to burst under these conditions and certainly many must have been subjected to at least these temperature changes with the resulting pressure changes.

"Even more convincing evidence of the lack of danger in subjecting aerosol containers to high altitudes is the fact that all household and cosmetic aerosol products are required by the Interstate Commerce Commission Regulations to be heated to 130°F. before shipment. For practically all aerosol products this temperature treatment results in at least a 100% increase in pres-

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sure. Thus, the container, before it is ever sold, has already been tested to a pressure much higher than it could reach as a result of pressure changes due to high altitudes.

"A final factor to be considered is the temperature of the airplane's cargo space at high altitudes. Since this space is not heated, its temperature will be less than ground temperature. This results in an actual lowering of the container pressure. At 10,000 feet the temperature rarely rises above 50°F. and is normally much lower. Even at 50°F., the decrease in pressure in the container resulting from the temperature drop exceeds the effective pressure increase resulting from the altitude change.

"The interesting conclusion to be drawn from these facts is that in practically all cases, an aerosol container is actually safer in the cargo space of an airplane at high altitudes than it is in the home where over ten years of experience and many million containers have demonstrated complete safety." ★

Europe Splits

(*From Page* 52)

of the British Government which could lead to a *rapprochement* of the two trade blocs. However, the British Government later assured its fellow Outer Seven members that the "offer" had been seriously misconstrued.

European observers largely discount the idea that the June 9 agreement will mean much, either to individual industries or to individual companies. Edwin L. Dale, Jr., writing in the *Times* for June 11, suggests that it will "leave untouched most of the infinite variety of products that make up modern European trade."★

Aerosol Regulations

(*From Page* 33)

points do not, however, take into account that the flash-point of an aerosol formulation will not be lower than the flash-point of the lowest flashing material. In fact, in most cases it will lie above that of the lowest flashing material because of the elevation effect of the higher flashing materials present. But classification by the British Transport Commission as "Dangerous Goods" is based on the flash-point of individual components, and at this stage one must confess without a doubt that the most difficult problem with flash-point is a suitable method. The standard Tag open cup method cannot be accurately followed with many aerosol products, particularly if the flash point lies above 0° F. and that is due to the volatile nature of the propellants. If the flash point is far above 0° F. then the propellant will start to boil before flashing occurs and the liquid level in the cup will drop below that prescribed for the test. The accepted procedure is to ignore this and to allow the propellant to evaporate freely to the atmosphere which means that one is frequently measuring the flash point not of the total formulation, but of the concentrate diluted with some unknown amount with propellant. On the other hand looking at it realistically that, of course, will be the very situation that will prevail at a given temperature if the container were to spring a leak and be in danger of ignition due to an outside flame source. The U.S. Bureau of Explosives has proposed a test designed to meet this objection described in a letter from H. A. Campbell to Dr. E. Graham (then of Crown Cork & Seal Co.), dated Feb. 27, 1956 and this method acknowledges the fact that part of the formulation would evaporate before actual flashing occurs. Samples of results obtained by this method are quoted by the following:

Table 4.	Propellant 12 (Wt. %)	95% Alcohol (Wt. %)	Temperature °F.
	35	65	+ 93
	65	35	+113

The flash point of 95% alcohol alone is between 57 and 61° F.

The four standard tests which are applied in the U.S. for flammability are as follows:

1. *Flame Projection Test.*

This test indicates how far a flame will extend beyond a burning taper if the spray from a pressurized dispenser is directed towards it. This is comparable to actual performance of the complete mixture as sprayed.

Standards:

(a) Pressurized dispensers producing flames, at full valve opening, over 8″, at 6″, should be classified as combustible.

(b) The pressurized dispensers producing flame, at full valve opening, over 18″, at 6″, should be classified as flammable.

(c) Pressurized dispensers which flash back at any degree of valve opening to the dispenser should be classed flammable.

2. *Flame Sustaining Test.*

The pressurized dispensers are discharged from a distance of 6″ into the candle flame exactly as is done in the flame extension tests. The source of ignition is then removed while continuing to discharge the dispenser.

Standards: If the flame continues to burn without an external ignition

(*Continued on Page* 87)

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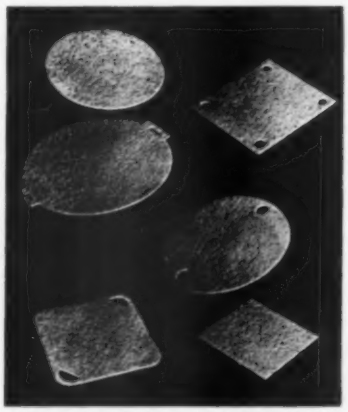

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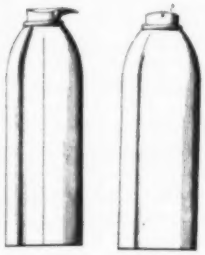
New Aerosol Patents

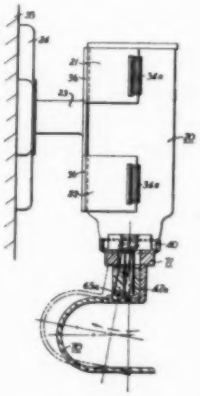
Listed below is a brief review of recent patents pertinent to the aerosol and related industries.

Complete copies of these patents may be obtained by writing to the Commissioner of Patents, U. S. Patent Office, Washington 25, D. C., and remitting 25 cents for each copy desired.

DESIGN PATENT 188,142 for AEROSOL CONTAINER. Issued June 7 to Jo Sinel, San Francisco.

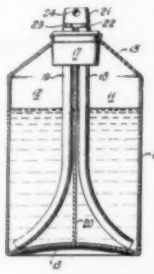


2,942,631. PRESSURIZED CONTAINERS AND AUXILIARY ADAPTER-ACTUATORS THEREFOR. Issued June 28 to Harold F. Biewald, Oceanside, N. Y.



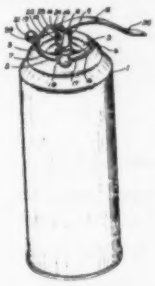
In a dispensing attachment for a pressurized, valve-controlled container which dispenses paste through a valve-controlling extrusion-nipple and in combination, an adapter having a flanger collar for securing said adapter to said container, said collar having an opening therein through which the outlet end of said valve-controlling extrusion-nipple will protrude when said adapter is secured to said container, an actuator, said actuator having a through passage formed therein sized to detachably couple with a tight fit to the protruding end of said extrusion nipple, said actuator being rockably supported upon said adapter so that when said flanged collar is secured to said container the protruding end of said extrusion-nipple will engage in said through passage and couple said valve-controlling extrusion-nipple to said actuator, a duct connecting at one end to said through passage and terminating at its opposite end in an extrusion orifice, said extrusion orifice being positioned adjacent said actuator support to direct extrusions therefrom upon an object which rockably engages said actuator, and said actuator, when thus rockably engaged by an object, rocking relative to said adapter to cause said valve-controlling extrusion-nipple, when coupled to said actuator, to open said valve and thus dispense paste from said container, through said extrusion-nipple, said through passage, said duct, and said extrusion orifice, upon said object.

2,941,696. DISPENSING CONTAINER. Issued June 21 to Robert Edwin Homm, Neshanic, N. J., assignor to Ortho Pharmaceutical Co., a corporation of New Jersey.



In a device for dispensing a liquid under pressure, in combination; a cylindrical container devided into two separate compartments by a common wall extending the length of the container; a conduit positioned within each separate compartment; a dual valve operating member having a common exit orifice separately communicating with two hollow valve members having annular projections slidably positioned within each conduit; valve seats at the end of each conduit which contact the annular projections when the valve members are in a closed position; a horizontal port in each valve member disposed above said valve seats when the valve members are closed; and spring means tending to maintain said hollow valve members in a closed position; whereby actuation of the valve operating member simultaneously unseats both hollow valve members permitting fluid to flow through both hollow valve members into said common exit orifice.

2,941,700. VALVE ACTUATOR FOR PRESSURIZED LIQUID SPRAY CONTAINERS. Issued June 21 to Jean M. Gable, Kansas City, Mo., assignor to Howard S. Gable, Kansas City.



A valve actuator for pressurized liquid containers having a closure and a spray head for discharge of the container contents in response to depression of said spray head comprising, a resilient mounting member expandable for sleeving over a container closure whereby contraction of said mounting member effects a resilient gripping engagement thereof with said container adjacent said closure, a hand lever pivotally mounted on the mounting member and extending therefrom over the spray head to normally rest thereon whereby downward pressure on said hand lever depresses said spray head for spraying contents of the container, spaced ears on the mounting member arranged whereby spreading said ears expands the mounting member, and means on the hand lever engageable with said spaced ears on the mounting member in response to swinging movement of said hand lever away from said spray head for spreading said spaced members and expanding the mounting member.

Applications for registration of the following trademarks were published in recent issues of the *Official Gazette* of the U. S. Patent Office. In not all cases are there strictly aerosol trademarks, however, many of the products listed below come within the category of those for which a possible future use in aerosols is foreseen.

GUARD, for household disinfectant-deodorant. Filed May 4, 1959 by Trager Manufacturing Co., Scranton, Pa., claiming first use Nov. 7, 1954.

My-Ko, for athlete's foot medication. Filed Jan. 15, 1959 by Robert S. Apelian, d.b.a. My-Ko Laboratories, Lansdowne, Pa., reporting first use May 5, 1937.

TORCH SONG, for perfume. Filed Jan. 27 by Watkins Products, Inc., Winona, Minn., giving first use as Dec. 21, 1959.

Trade Mark Applications

N!O!, for aerosol spray composition used as a mating repellent for dogs. Filed Aug. 14, 1959 by Airkem, Inc., New York, with first use July 27 of the same year.

QUIT, for clothing spot remover in pressurized containers. Filed Nov. 24, 1959 by Aerosol Corp. of America, Wellesley Hills, Mass., with first use claimed for Nov. 6 of same year.

DENTA-MIST, for dental lubricants and separatives. Filed Jan. 14 by W. Wade Erdman, d.b.a. The Warwec Co., Pittsburgh, Pa., with first use reported as Sept. 11, 1959.

COMMAND, for men's hair conditioner and dressing. Filed June 15, 1959 by Lobco, Inc., d.b.a. Alberto-Culver Co., Chicago, with first use given as Sept. 16, 1957.

DEORANT, for essences for use in room deodorants. Filed Jan. 28, 1959 by An-

toine Francois Peyron, Paris, France, claiming first use under French Registration dated Sept. 2, 1958.

YANKEE CLIPPER, for protective coatings. Filed Continental Coatings Corp., New York, reporting first use Aug. 11, 1941.

CURLIFE, for hair setting lotion and all purpose hair spray. Filed June 19, 1958 by Beauty-Rama Corp., Chicago, giving first use as May 25, 1956.

ROU, for hair coloring preparations. Filed Jan. 20 by Roux Laboratories, Inc., New York, reporting first use Dec. 17, 1959.

STERICIDAL, for antiseptic, cleansing, and wetting agent to be used with plastic contact lenses. Filed Oct. 6, 1958 by Mueller Welt Contact Lenses, Inc., d.b.a. Davis-Ward Laboratories, Chicago, claiming first use in November, 1952.

NO TRACE, for room deodorants. Filed June 8, 1959 by The Gillette Co., Boston, giving first use May 22 of same year.

CLICK, for hair fixative. Filed Nov. 9, 1959 by Helene Curtis Industries, Inc., Chicago, with first use claimed on or about Feb. 6, 1959.

PENIT, for penetrating oil. Filed Feb. 18 by Sentinel Chemicals, Inc., Houston, Tex. with first use given as June 1, 1959.

REDYZIT, for composition for cleaning and preparing a surface to be covered with a protective and/or decorative coating. Filed Aug. 26, 1959 by DeMert & Dougherty, Inc., Chicago, reporting first use on or about July 24, 1959.

DOGZOFF, for animal repellent in the form of spray. Filed Sept. 10, 1959 by Bohlender Plant Chemicals, Inc., Tipp City, Ohio, claiming first use in June 1933.

ODIFLEUR, for incense used to freshen and deodorize the atmosphere in rooms. Filed July 17, 1958 by Antoine Regis Peyron, Paris, France, reporting first use on French Registration dated March 20, 1958.

GARD, for rust inhibitor, weatherproof spray, leather dressing, room deodorant, and fire igniting preparation, contained in and dispensed from aerosol containers. Filed Feb. 25, 1958 by Gard Industries, Inc., Northfield, Ill., giving first use Dec. 1, 1950.

PIERRE BALMAIN, for perfume and toilet water. Filed Oct. 15, 1959 by Pierre Balmain, Paris, France, claiming first use Dec. 26, 1946.

NELITA, for spray set for hair and other cosmetics. Filed July 15, 1959 by Robert G. Mattox, d.b.a. Mattox Laboratories, Hollywood, Calif., with first use reported as Sept. 6, 1957.

SCC Announces Program for Annual Cosmetic Seminar

THE Society of Cosmetic Chemists last month announced the complete program for its Seventh Annual Cosmetic Seminar, which is scheduled for Sept. 15-16 at the Drake Hotel in Chicago. Symposiums on "The Biodynamics of the Skin," "The Coloring of the Hair," and "Analysis of Cosmetics" will comprise the major portion of the program. Registrations, at $30 for members and $35 for non-members, may be made in advance to Walter Wynee, Society of Cosmetic Chemists, 2 East 63rd Street, New York 21.

The three sessions of the program will include the following:

SESSION 1

Thursday A.M.—September 15, 1960

Theme: THE BIODYNAMICS OF THE SKIN

Moderator: Dr. Adolph Rostenberg, University of Illinois

1. *The Skin as a Sensory Organ*—Dr. Richard K. Winkelmann, Mayo Clinic.
2. *The Skin as a Biochemical Factory*—Dr. Richard A. Ellis, Brown University.
3. *Patterns of Reaction of the Skin to Injury*—Dr. A. L. Lorincz, University of Chicago.

SESSION 2

Thursday P.M.—September 15, 1960

Theme: THE COLORING OF HAIR

Moderator: Dr. Ray C. Houtz, The Toni Company.

1. Introductory remarks: *"Human Hair, a Chemical Substrate"*—Dr. Donald L. Underwood, research supervisor, The Toni Company.
2. *Natural Color Pigment of the Hair*—Dr. Samuel Becker, Illinois University and Whiting Clinic.
3. *Properties of Peroxide Bleached Hair*—Walter Edman, Evans Research & Development Corp. Joint effort with Becco Division Food, Machinery and Chemical Corp.
4. *The Color Development of Oxidation Dye Intermediates*—Gus Kass, Alberto Culver Co. and Louis Hoehn, Jr., Nianza Color & Chemical Co.

SESSION 3

Friday A.M.—September 16, 1960

Theme: A NEW ERA IN THE ANALYSIS OF COSMETICS

Moderator: Dr. William Colburn, Colburn Laboratories.

1. *Detection, Isolation and Identification of Surface Active Materials in Cosmetics*—Dr. Milton J. Rosen, Brooklyn College.
2. *Recent Advances in Instrumental Techniques of Analysis*—Robert J. Manning, Beckman Instrument Co.
3. *Rheological Measurements in the Cosmetic Industry*—Dr. R. H. Marriott, County Laboratories Ltd., England.

Marcus to Reed & Carnrick

Reed & Carnrick, Kenilworth, N. J. marketer of ethical pharmaceuticals, including "Tarcortin" aerosol topical antibiotic, last month appointed Robert M. Markus sales promotion and advertising manager.

•

Washington Site of Beauty Fair

The Sheraton Park Hotel, Washington, D. C. will be the site of the first Internationale Beauty and Fashion Fair from Oct. 10-12. Sponsored by the Internationale Beauty and Fashion Fair Committee, in cooperation with *The Washington Post*, it will have a program including cosmetic and perfume demonstrations, lectures, clinics, and fashion show productions. Attending will be merchandise managers, executives, and cosmetics buyers of Washington's leading department stores, drug chains, and specialty stores, as well as approximately 10,000 women.

•

Frothingham Joins Cowles Chem.

John L. Frothingham, former sales manager of the Industrial Chemicals Division of Pittsburgh Coke and Chemical Co., has been named manager of technical service for the Chemical Division of Cowles Chemical Co., Cleveland. He holds bachelor of science and master's degrees in chemical engineering from Princeton University, and during the war served as an officer in the Navy.

CLASSIFIED ADVERTISING

Address all classified replies to Box Number c/o *Aerosol Age*, PO Box 31, Caldwell, N. J. Rates for "Help Wanted" advertisements are 20¢ per word; minimum charge $3.00. Rate for individuals seeking employment is 5¢ per word, $1.00 minimum. Advertisements of new machinery, products and services accepted at the rate of $10.00 per column inch. Minimum space, one inch. Copy closing date, 10th of preceding month. *Checks must accompany all orders.*

SITUATIONS WANTED:

PLANT SUPERINTENDENT

presently employed by well known cosmetic firm, seeks challenging position with aggressive aerosol manufacturer. 12 years background as plant superintendent. Three years in aerosol, covering all phases of production, plant maintenance, quality control and production scheduling. 40 years old, married. Resume upon request.

Address Box 226, c/o Aerosol Age.

AEROSOL SPECIALIST: B.S., 32 years old, married, 10 years experience, 7 years experience in all phases of Aerosol sales, research, development and manufacture. Thoroughly knowledgeable in formulation, valve and container specifications. Capable of heading research, development and control department. Box 227, c/o Aerosol Age.

COMPONENTS FOR SALE

FOR SALE

The following excess stock of aerosol packaging material:

183,000	Aerosol Cans 211 x 413 (American Can Co.)
263,000	Calmar "O" Type Actuators (Heads)
101,974	Gilbert Plastic No. 400 White Cover Caps
65,000	Sterling Seal Co. 14-1 Overcaps
61,000	Precision Valves—Type 2NN —Double Vinyl Coating—for 211 x 413 cans
61,000	Profax Tubing for 211 x 413 Cans
103,000	Acco Flare Caps

Full specifications on request. Very low prices. Please contact J. L. Hall, Purchasing Dept., Heublein, Inc,. Hartford 1, Conn.

Aerosol Regulations

(*From Page 84*)

source, the product is classified as flammable.

3. *Drum Test.*

The drum test indicates hazards, if any, that may result if one were to spray excessive quantities of different formulations in a confined space and there is a flame present, and also the result of varying degrees of dilution of spray with air when there is a flame present.

As we are concerned mainly with flash points, I do not propose to go into details about the drum tests (Pg. 33 Mar. *Aerosol Age*). If no positive result with the drum tests is observed within 60 seconds, then the test is considered negative. Results in Table 5 indicate how flammability classifications can vary with discharge rates.

It is important to stress that the 20° F. flash point requirement set by the I.C.C. applies to a complete formulation *including* the propellant.

The C.S.M.A., however, recommends a 100° F. flash point test which applies to the formulation without the propellant. This is designed primarily to assist the prospective marketer in preparing a product which is safe for consumer use. The various tests were applied to the following four formulations which may be considered as representative of the majority of packs on the market today.

1. 5% Isopropyl Alcohol
   95% Freon 11/12 (1:1) mixture
2. 65% Ethyl Alcohol
   35% Freon 12
3. 40% Ethyl Alcohol
   60% Freon 11/12 (1:1) mixture
4. 65% Xylene
   35% Freon 12.

du Pont were kind enough to carry out the various tests on these formulations.

All formulations were packed with Precision all-nylon valves. Each test was conducted using the standard Precision actuator and the Precision mechanical break-up actuator. The results were as follows:

Table 5

Formulation	*Extension*	*Sustention*	*Open Drum* Sec.	Gm.	*Closed Drum* Sec.	Gm.
1	0	Negative	>60	—	>60	—
1a*	0	Negative	>60	—	>60	—
2	23	Borderline	45	—	25	27.2
2a*	19	Positive	>60	—	37	27.7
3	16	Negative	>60	—	>60	—
3a*	9	Negative	>60	—	>60	—
4	23	Positive	18	21.3	10	9.9
4a*	19	Positive	29	18.4	18	12.8

* Fitted with Precision mechanical break-up actuator.

The above results indicate how a reduced spray rate will increase the time required to obtain a positive drum test. Thus in the case of a formulation the flammability of which may be borderline by the drum test, a changed actuator or valve which decreases the spray rate will often lead to a negative result within the 60 seconds specified time. A positive test is related more closely to the amount of material sprayed into the drum than it is to the time of spraying or the manner in which the material is sprayed.

(i) an air freshener (5% isopropyl alcohol, 95% propellant 11/12)

(ii) an insecticide (15% kerosene, 85% propellant 11/12)

(iii) two hair lacquers
   (a) 50% alcohol,
   50% propellant 11/12
   (b) 65% ethyl alcohol,
   35% propellant 12

(iv) a mothproofer (65% xylene, 35% propellant 12), and

(v) a window cleaner (90% water, 5% isopropyl alcohol, 5% butane).

In conclusion, I hope that the foregoing facts have brought home the

difference between the inflammability of individual compounds, and their behavior when packed in pressurized form.★

Consumer Survey

(*From Page* 28)

since 1957, has been losing ground steadily to two of the newer brands, "Adorn" and "Breck." Revlon, second in 1957 and 1958, held its third position, but again lost some ground to some of the newer brands.

The pressurized shaving cream category was one in which two of the leaders, Colgate "Rapid Shave" and Boyle-Midway's "Aero-Shave," actually strengthened their positions. Colgate's product, with a gain of nearly 4%, regained the number 1 position it had lost to "Rise" in 1958. "Aero-Shave" gained slightly to remain ahead of "Burma Shave," and a number of others gained or lost slightly.

The survey is conducted by means of questionnaires mailed to households and returned in person to the survey office. Interviewers check filled in reports and give the respondent a bag of groceries as a reward. For 1960, 8619 questionnaires were mailed, 8407 were delivered, and 6459 were filled in and brought to the survey office—a return of 76.7%. The questionnaires were returned from Jan. 2-19.

The Greater Milwaukee area has a total population of 1,126,289, with 334,800 families. Objective of the survey is to provide national advertisers, their advertising agencies, distributors, and jobbers with detailed data to aid them in doing business in the Milwaukee area. The 1960 Edition is the 37th such analysis conducted by the *Journal*. Copies of the complete survey are available by writing to the Manager of Advertising Sales, *The Milwaukee Journal*, Journal Square, Milwaukee 1, Wis.★

Cosmetic Aerosols

(*From Page* 27)

5.00 Dipropylene Glycol
91.60 SDA 40

100.00

Gas Charge:
70% Above Rx
30% Propellant
(60% Propellant 114)
(40% Propellant 12)

100%
Chill and Filter before charging.

Deodorant Mist Aerosol

DEODORANT MIST AEROSOL

2.00 Ethyl Cellulose N-10 Alcohol Soluble (Hercules Powder Co.)
.20 G-11® (Hexachlorophene U.S.P.) (Sindar)
12.40 Alcohol #40 Anhydrous
.20 Isopropyl Myristate
.20 Perfume Oil
85.00 Propellant 11 & 12 (50/50 mixture)

100.00
Use of 0.013 Precision valve for the spray. Above materials are dissolved in alcohol and then charged with propellant.

The above preparation is a combination of the deodorant and deodorant-cologne type formulations without the use of astringent ingredients. Formulations utilizing aluminum salts are few in number due to the limited amount of these salts that can be incorporated into a product without causing precipitation.

Sunscreen Foams and Sprays

Of the many products which have become quite successful when aerosol-packaged, the sunscreen preparations have proved the efficiency of this type of packaging. Unfortunately, it is difficult to make definite formulation recommendations due to the many sunscreening agents available, each of which might create different problems. We would, however, like to cite two formulation types which can be used as working examples:

AEROSOL CREAM SUNSCREEN (Foam)

Portion A:
13 Myristic Acid (First Grade)
50 Stearic Acid (Emery Ind.—Emersol 132)
5 Cetyl Alcohol
13 Isopropyl Myristate
50 Glycerine U.S.P.
10 Sunscreen Agent
30 Triethanolamine

Portion B:
816 Distilled Water
10 Benzyl Alcohol

Portion C:
3 Perfume Oil

1000

Procedure: Heat Portion A to 70°C. until products are dissolved. Heat Portion B to 70°C. and add to Portion A. Stir until cool, then add to Portion C.

Loading Charge:
90% Above Formulation
10% Gas
(60% Propellant 114)
(40% Propellant 12)

100%

AEROSOL SUNSCREEN OIL

1.00 Sunscreen Agent
5.00 Isopropyl Myristate
1.00 Silicone G.E. Oil SF-96 (40)
0.25 Perfume Oil
0.50 Lanolin Oil (Malmstrom)
0.05 Menthol Racemic U.S.P.
12.20 Alcohol #40 Anhydrous
80.00 Propellant
(11-75%)
(12-25%)

100.00

The concentration of sunscreening agent in both formulations can be varied depending on the recommendations of individual manufacturers.★

Future European Market

(*From Page* 23)

keting knowledge to help the European partner sell its own area. This would be quite a bit more than a licensing arrangement, more accurately a full partnership.

This concept would appear to have considerable merit, and be well worthy of discussion at the top level of management. For if, as the Arden House report indicates, the establishment of trade alliances in Europe will promote efficiency, lower prices, and produce a larger volume of sales, then the U. S. aerosol industry would do well to remain alert to its own opportunities in this area.★

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W. S. McLeod Given New Post

W. S. McLeod, for the past eight years head of the Canada Department of Agriculture's pesticide testing laboratory in Ottawa, has been appointed supervisor of the pesticide unit, Plant Products Division. He succeeds C. H. Jefferson, who had previously been named chief of the division's Fertilizer and Pesticide Section.

Mr. McLeod holds a B.Sc. degree from the University of Alberta and an M.Sc. degree from Macdonald College (McGill). For five years he served as assistant professor of entomology at the University of Manitoba and was later associated with the Green Cross Products Division of Shwerwin-Williams Co. of Canada, Ltd. He joined the Agriculture Department as an insecticide specialist in 1950 and was appointed head of the laboratory two years later.

Penick Reshuffles Execs

S. B. Penick & Co., New York manufacturer of pharmaceuticals, insecticides, and aromatics, last month announced the election of Albert D. Penick as president. He succeeded S. Barksdale Penick, Jr., who moved up to become board chairman and chief executive officer.

William A. Thawley and Anibal J. Dotres were named vice presidents of the company.

OVER THE TRANSOM

HIGHLY gratifying news last month from the U.S. Department of Agriculture: Although the basic aerosol patent (Number 2,321,023, dated June 8, 1943) has now expired, and it is now longer necessary to obtain a license from the Department, the USDA plans to *continue* its studies in the aerosol field. B. T. Shaw, administrator of the USDA's Agricultural Research Service, reports that "As in the past, our scientific skill will be available to all who may have an interest in this important development." A glance back over the scientific literature on aerosols over the past 17 years will give the reader an idea of why most of the industry will be so pleased that this work is continuing.

* * *

Talk about a good week! Fred Webster, of the van Ameringen-Haebler Division of International Flavors and Fragrances, Inc., was not only named a corporate vice-president during the last week in June, but that same week won the TGA's Cecil Smith Memorial Golf Trophy for shooting the best game of golf at the association's annual convention at Poland Spring.

Not since the introduction of "Jet Spray Bon Ami" has the office of this magazine been deluged with so many phone inquiries as it has for "Glis," new pressurized starch product of the Aerosol Corp. of America Wellesley Hills, Mass. Store jobbers, advertising agencies, and many others, alerted by a good spot television announcement, are apparently very much interested in the product.

* * *

Jack Wittke's "Taffy Pull," an annual picnic for customers and fellow suppliers at Jack's Westfield home, was held June 28 and was once again a huge success. Seth Schneible, Crown's manager of aerosol sales, proved himself the leading candidate for "athlete of the day," both for his performance as a "prize winner" and for his good work in a rugged basketball game.

* * *

Two well known figures in the fragrance industry were married on June 16. Pierre Harang, vice-president and director of Houbigant, and Miriam Gibson French, beauty editor of *McCall's* Magazine, were married in New York's First Presbyterian Church. The bride was the original executive director of the Fragrance Foundation and has been with *Charm Magazine*, Shulton, Guerlain, and other perfume firms. Her husband has been director, vice-president, and president of the TGA and is a past vice-president of the Fragrance Foundation. He has been with Houbigant for 36 years.

* * *

Again on the subject of outings, the annual Aerosol Industry Invitational Golf Tournament, scheduled for August 9 at Winged Foot Golf Club, Mamaroneck, N. Y. will bring together some of the best (and the worst) golf players to compete for a handsome array of prizes.

* * *

Although it won't come out in time for this issue, look for an important announcement from Bradley-Sun about the pressurized food field. Bradley-Sun's version of a previously developed aerosol device is expected to make commercially practical the packaging of highly viscous products without re-formulation.

* * *

Consumers associations, which have a habit of looking perhaps too harshly at the cost considerations of aerosol products buying, have rated aerosol mothproofers below other means of dispensing moth protection materials. A group called Consumers' Association Ltd., in England, acknowledged that aerosols are effective to use, but criticized the wide variation in product delivered between the various brands. Of the five (British) products tested, the association reported, one contained enough to mothproof 12 square yards of material, another 36 square yards!

* * *

The "Ten Best Dressed College Girls," selected by *Glamour Magazine* report they prefer spray to liquid cologne, but showed a preference for liquid over spray perfumes.

* * *

Jean Baer, former New York area salesman for Pennsalt's "Isotrons" and until recently production manager for SpraPak Chemical Co., Brooklyn, has left the aerosol business.

"If the wind is right, it'll knock their hats off!"

PETERSON FILLS *Both*... LIQUIDS AND AEROSOLS

A *Complete* Packaging Service That Can Mean Important Freight Savings To You...

AEROSOLS...
filled by efficient, accurate, high-speed pressure or cold-filling methods with halocarbon or hydrocarbon propellants (or a combination of both).

LIQUIDS...
filled in metal, glass or *plastic* in any size from 2-ounce containers to 55-gallon drums.

And when your products must be sent to common destinations in different types of packages, Peterson can do all the filling and, then, combine the various types into dollar-saving single shipments. For complete details, write, wire or phone...

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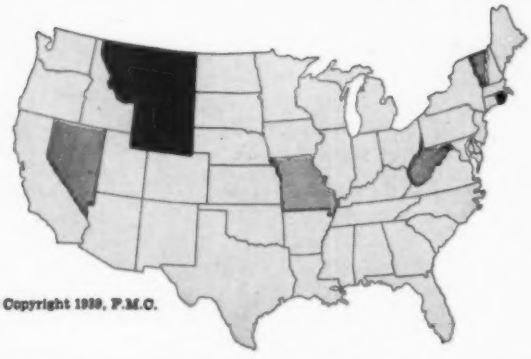

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FAIRFIELD CHEMICALS' First National Insect Resistance Survey

RESISTANT INSECT DISTRIBUTION

Insect Resistance | No Insect Resistance | States Unreported

(†) *Survey available upon request on your company letterhead.*

(*) *Reg. U. S. Pat. Off. FMC*

Watch for Fairfield's Second Insect Resistance Survey Report. Out Soon!

In a recent nationwide survey† leading Entomologists reported flies and roaches have "learned-to-live" with many widely used insecticides. Once powerful formulations no longer prove fully effective. Worse, each new insect generation becomes more and more immune.

If your insecticide sales have slumped, blame the resistant insect! It's time to take 'him' seriously. The survey showed that formulations with PYRENONE* offered long range effectiveness and high killing power, are non-toxic to humans and warm blood animals. Pyrenone, a combination of pyrethrins and piperonyl butoxide, proved to be the safest, surest, most economical insecticide base. It's time to put performance... *and profits, naturally*... back into your insecticides. Reformulate with Pyrenone.

KEEP YOUR INSECTICIDES MARKETABLE

- Periodically check insect resistance to your products.
- Tailor your formulations to meet specific needs.
- Prescribe proper application methods.
- Reformulate to include Pyrenone.

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Branches in principal cities. In Canada: Natural Products Corporation, Montreal and Toronto.